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ABSTRACT

The book presents background information and papers which were prepared for a conference on educational development in Asia and Oceania. The document is presented in three major sections. Section I offers an overview of regional development strategies with emphasis on the relationship of education to economic development. Major regional objectives are discussed including broader access to education, increase in number and type of nonformal education programs, emphasis on community participation, and closer linkages between education and work. Section II reviews education in Asia and Oceania on a country by country basis for 23 countries including Afghanistan, Australia, Bangladesh, Burma, China, India, Indonesia, Iran, Japan, Korea, Malaysia, Pakistan, and Thailand. For each country, information is presented on objectives, enrollment statistics and projections, major problems, educational philosophy, educational policy, examination systems, literacy rates, rural urban differences, adult education, and vocational training. Section III offers a bibliographic supplement which lists conference reports, newsletters, journal articles, books, government publications, and school surveys. (DE)

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EDUCATION

IN ASIA AND OCEANIA

*The Fourth Regional Conference
of Ministers of Education and
Those Responsible for Economic
Planning in Asia and Oceania,
Colombo, Sri Lanka, 24 July -
1 August 1978*



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CONTENTS

Preface	i
<i>Section One : Education in the region of Asia and Oceania</i>	
Regional review	iii
<i>Section Two : Education in countries of the region of Asia and Oceania</i>	
The Democratic Republic of Afghanistan	1
Australia	8
Bangladesh	23
The Socialist Republic of the Union of Burma	37
The People's Republic of China	50
India	56
Indonesia	73
Iran	84
Japan	94
The Republic of Korea	104
Malaysia	121
The Mongolian People's Republic	133
Nepal	137
New Zealand	151
Pakistan	167
Papua New Guinea	182
The Philippines	195
Singapore	206
The Socialist Republic of Viet Nam	221
Republic of Sri Lanka	232
Thailand	250
The Uzbek Soviet Socialist Republic of the Union of Soviet Socialist Republics	268
Democratic People's Republic of Korea	273
<i>Section Three : Bibliographical supplement</i>	
Education in Asia and Oceania: a bibliography	279

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Australian Information Service—p. 8, divider of Section Three
MacQuarie University, Australia—p.9
Ministry of Education, Japan—p. 100, 101, 103
New Zealand Information Service—p. 154, 155, 163
Department of Education, Papua New Guinea (from official publications)—
p. 185, 189, 194
Information Service of the Union of Soviet Socialist Republics—p. 272
Institute for the Promotion of Science Teaching, Thailand—p. 259
Alfred Wong Partnership, Singapore—p. 209
Bangkok Post/World—p. 255, 258
P. Harbans Singh, Singapore—p. 210
UNICEF, Bangkok—p. x, xii, xiii, 39, 41, 83, 84, 91, 93, 120, 124, 127, 131,
223, 231, 251, 258, 264, 267
UNICEF, Kathmandu—p. xv, divider for Section Two, 141, 145, 150
UNICEF SCARO, New Delhi—p. xviii
UNICEF—p. 3, 33, 36, 58, 61, 63, 67, 75, 79, 145, 177, 181, 211, 215, 220,
249
Unesco, Paris—p. 135

PREFACE

The Fourth Regional Conference of Ministers of Education and Those Responsible for Economic Planning in Asia and Oceania was held in Colombo, Sri Lanka, from 24 July to 1 August 1978 with the Government of the Republic of Sri Lanka serving as host. It was organized by the United Nations Educational, Scientific and Cultural Organization (Unesco) with the co-operation of the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP).

By its terms of reference, the Conference was invited to "assess the development of education in Asia, with particular reference to the reforms of education undertaken in Member States for the purpose of linking education to social, economic and cultural development. Present trends in educational reforms in the region were studied, and particular consideration given to rural development and social transformation, the democratization of education, and the interlinking of education and productive work."

The first problem studied by the Conference was that of equal access to education - vitally important in order to guarantee the right to education on which the exercise of every other human right largely depends. Another problem taken under consideration was the interlinking of education and productive work, a concern which is reflected in a large number of reforms under way in the region. That idea points up the supreme purpose of education, which is the all-round development of the individual, since such interlinking - which makes for a smooth entry into the world of work - helps to remove the artificial barrier between manual and intellectual work, prepares children for life, and enhances both the

Education in Asia and Oceania

general level of culture and the individual's sense of social service.

The Conference requested by a resolution that the documents prepared for the Conference be published by Unesco for wider circulation. The country reports presented to the Conference are published in condensed form in this Bulletin. They are preceded by an overview of the main trends of educational developments in the region based on the deliberations of the Conference as recorded in its report.

CONFERENCE OF MINISTERS OF EDUCATION, SRI LANKA 1978

The Government of the Republic of Sri Lanka marked the opening day of the Fourth Regional Conference of Ministers of Education and Those Responsible for Economic Planning in Asia and Oceania with a beautiful ceremony which reflected the unique cultural tradition of the country.



The picture above shows H.E. Mr. J.R. Jayawardene, President of the Republic of Sri Lanka (centre), during the Conference. On his left is Mr. Amadou-Mahtar M'Bow, Director-General of Unesco, and on his right H.E. Mrs. R. Barkataki, India's Minister of State for Education, Social Welfare and Culture.

The photograph at left shows the lighting of the traditional oil lamp in the formal opening ceremony by H.E. Mr. Ronnie de Mel, Minister of Finance and Planning and (partially hidden) H.E. Mr. Ranil Wickremasinghe, Minister of Youth Affairs and Employment, Sri Lanka.



The Conference included numerous plenary sessions; this page carries three photographs of the distinguished participants in one section of the Bandaranaike Memorial International Conference Hall.





The photo at top pictures several school bands in perfect alignment on the grounds of the Conference Hall. The picture above shows a 'stick dance', one of several folk dances performed at the ceremony. At right, a partial view of a hevisi band.



Above, we see a girls' *hevisi* band (a drum band) using Sri Lankan instruments, playing on the veranda of the Conference Hall. Below are pictured several of the many school ensembles which paraded before the Conference.



SECTION ONE
EDUCATION IN THE REGION OF ASIA AND OCEANIA



REGIONAL REVIEW

National development strategies in many countries of the region have in recent years undergone profoundly significant evolutions. These strategies are no longer centred exclusively on economic growth. There is strong emphasis on the principles of social equity and distributive justice which must complement the objective of economic growth in the formulation of national development strategies. In the interrelationship of development and education, education, far from being a peripheral sector, is seen as one of the core elements of the development process.

The Conference was single-voiced in its emphasis on moral and humanistic values which are to inspire a new kind of development, reconciling each nation's cultural identity with the demands of modernization and the imperative need for a more equitable relationship among the nations. In a global context this new approach to development is articulated in the concept of a new international economic and social order.

The educational policies which have evolved in many countries in Asia and Oceania during the 1970s clearly reflect this new dimension of development. Exclusive preoccupation with growth is giving way to a comprehensive range of policy objectives which accord an important role to education in national and individual renewal. The Singapore Conference of Ministers, convened seven years ago, marked an important step in this regard. Its resolutions, while mindful of the need for continued educational expansion, gave primary emphasis to the qualitative innovations and major reforms and reorientations of educational systems.

The Sri Lanka Conference, addressing itself to its terms of reference, identified four major areas of emphasis in the educational reforms currently being undertaken in the Member States.

One area is the goal of broadening access to education encompassing all age-ranges and providing educational services much more diverse in character than those associated with purely formal schooling. Indeed, the customary equation of education with schooling is being called into question by the current generation of educational reforms.

The learning needs of adults and youth not reached by the formal school system and of the disadvantaged or deprived population groups have become an increasingly important policy concern and a vital part of the problem of equal access. Social inequalities and educational inequalities tend to go together, the former engendering the latter and being reinforced by them. Therefore national development policies which aim at reducing social inequalities must necessarily treat measures for equalizing educational opportunities as an indispensable means of social mobility.

Attention is moreover being directed to the imbalances which persist within school systems - between rural and urban areas, between different levels of education, and in the distribution of educational opportunities among different population





groups. These imbalances are cause for concern to a growing number of countries which stress equal access to education as a vital prerequisite of national unity and social justice.

A second major objective of several current educational reforms is the emphasis on community participation and involvement in the educational endeavour. Community participation is seen as a two-way process. On the one hand it provides support in various forms to the schools; on the other hand the schools become actively involved in the problems of the community. Clearly the decentralization of educational administration is an important prerequisite of any strategy which aims at massive mobilization of people's participation in education. Moreover such enhanced participation of local communities may well hold the key to restoring education to its rightful place in community life where it will be inspired by the people themselves and contribute to their collective and individual wellbeing.

Closer linkages between education, work experiences and transition to the world of work form another major element of several current educational reform endeavours. In the majority of the countries of the region, including the more industrialized ones, efforts to combine education with productive work have been prominent in structural and curricular reforms undertaken



at all levels. The interface of education and employment has come in for critical scrutiny, particularly in view of the problem of unemployed school leavers which in many countries in the region is very serious.

A fourth theme running through the discussions in the Conference was the growing role accorded to non-formal modes of education in the context of a new and comprehensive system of educational services. The search for new methods in non-formal education stems from a widespread concern that education must be made more functional to the lives and aspirations of non-professional people, and particularly those in the rural areas. There was firm expression of the need for formal and non-formal education to be brought together and fused in a relationship of mutual reinforcement.

In the period since 1971 the progress of education in the region, seen in quantitative terms, showed a slackening pace, although the picture varies from country to country. In a few countries the growth rates were high and in one country universal secondary education was achieved, but in most countries the momentum of expansion was slower than in the 1960s. Average annual growth rates of total enrolment declined from 7.5 per cent in 1960-1965 and 4.4 per cent during the following five years to 3.4 per cent in 1970-1975. What is more, education grew

more slowly at the base than it did at higher levels. Between 1970 and 1975, primary school enrolments increased at a modest rate of 3 per cent per year, significantly less than the 4.8 per cent recorded in secondary education, or the 4.1 per cent annual growth of higher education.

Demographic factors have continued to exert strong influence on the quantitative development of education in the region. The average annual population growth rate in the developing part of the region is estimated at 2.5 per cent during the 1970s, while increases in the school-age population have been in excess of 3 per cent per year. In consequence, the population segment aged 15 years or younger accounts for around 40 per cent of the total population in the developing countries of the region, placing a heavy burden on education and other youth-centred services.

The numbers of children and youth not in school have risen both in the primary and secondary school age groups. Some progress has been made in relative terms, with the proportion of those 6-11 years old not in school declining from 41.4 per cent in 1970 to 37.8 per cent in 1976, and from 71.3 to 69.3 per cent for the age group 12-17. But in absolute numbers, the non-schooling gap in the developing countries of the region has widened during that period, partly because of rapid population growth.



Not unlike the problem of out-of-school youth, illiteracy has declined in relative terms but constitutes a challenge bigger than ever before if one looks at the absolute numbers involved. Literacy drives and fast-expanding school systems have reduced the percentage of illiterates in the region from 66 per cent in 1960 to 58 per cent in 1970. Their absolute number, however, had increased from 307 million in 1950 to 355 million in 1970. Extensive disparities persist in most countries in the literacy levels of men as against women, as well as between rural and urban populations. Faced with a relative stagnation of literacy drives after the noteworthy progress achieved in the past two decades, many countries are currently engaged in the search for fresh and more effective approaches to the problem of combating illiteracy. Increasingly, literacy programmes are viewed as part of a broader effort to meet the learning and training needs of adults: they now seek to involve the mass of the people in more active roles than former practices foresaw.

The rapid growth of secondary and higher education has helped ease the earlier shortages in the most crucial educational resource - the supply of qualified teachers at both primary and secondary levels. Student/teacher ratios have been lowered in most countries of the region, although bottlenecks in certain specialized fields and in the supply of female teachers continue to demand attention. With some 2.3 million additional teachers trained and recruited in the 10 years since 1965, national systems of teacher training have had to undergo a very critical period. This has been made worse by the demands which pervasive curricular and structural reforms have made on the in-service teacher training capacity of most Member States.



Teachers' salaries account for the bulk of recurrent educational expenditure. At the first level particularly, severe resource constraints persist with regard to such non-teacher items as building construction and maintenance, textbooks and learning aids, and scholarships for needy and disadvantaged students. In a number of developing countries special attention is being devoted currently to the production and distribution of textbooks and the use of mass media, particularly radio, for educational purposes.

Overall, resource allocation per student continues to show extreme variations between first-, second- and third-level education in most countries of the region. Public recurrent expenditure per student in higher education tends to range from three to more than 30 times the amount spent on the average primary pupil. By 1975, the share of pre-school and primary education in national education budgets, compared with the 1965 figures, had shrunk significantly in nearly all developing countries of the region.

Such imbalances in the resource allocation patterns apart, both the developed and developing Member States of the region have increased their financial commitment to education. During the period 1970 to 1975, public expenditure on education rose by 16.2 per cent annually in the developing countries (although much of the increase was eroded by inflation). This brought the average share of GNP devoted to education to 2.9 per cent in 1975 (which, it should be said, was below that of other developing regions in the world). In the four developed countries of the region, the percentage of GNP allotted to education in the form of public expenditure ranged from 5.5 to 7.6 per cent around 1975.

The educational policies in developed countries of the region were aimed at the improvement of the quality of education, notably curricular reforms called for by the fast-evolving requirements related to scientific and technological progress. Pre-primary education was rapidly expanded. Secondary education for all was being realized.

In reviewing the quantitative progress, several speakers at the Conference pointed out that educational expansion has not always been in line with group needs and national development



priorities. Despite heavy investments in education, sharp disparities in the provision of educational opportunities have not only persisted but in some cases may have been accentuated. In a number of countries, disparities still exist in the distribution of educational opportunities between girls and boys. Moreover, the opportunity gap favouring boys as against girls widens as one proceeds to secondary and higher education. The analysis of literacy and educational attainment data in the adult female population confirms the imbalances found within school systems. It is only in the field of non-formal education that the participation of females frequently exceeds that of men, testifying to the strength of their unmet educational aspirations.

Another imbalance is created in many countries by the accelerating growth rates of secondary and higher education while the broad base of education is left comparatively weak in both quantitative and qualitative terms. Primary education has usually been slow to expand its purpose beyond that of preparing and selecting students for the next higher level. Preferences in resource allocation accorded to secondary and higher education seem to have limited the scope of qualitative improvements

in primary education, especially with regard to those factors which cause repetition and drop-out.

Then there are imbalances between rural and urban areas in the quality and availability of education. Such imbalances have tended to persist in spite of intense efforts to decentralize educational planning and management procedures, to employ school mapping for more rational and equitable networks of educational services, and to 'deconcentrate' institutions of higher education with regard to location.

The problem of appropriate and functional education is highlighted in the context of the need for rural transformation and development. Educational policies in many developing countries in the region reflect increasing concern that large numbers of children from rural environments or from culturally and economically deprived sections of the population leave school without the functional skills they need to cope with their lives in a productive way. A decisive improvement of the prevailing drop-out



patterns (which on the regional average condemn six out of ten children to withdrawing from school before even reaching grade V) may appear the most obvious step to take. Highly important in this task is the need for developing curricula and methods which are adapted to the children's environments and backgrounds and are not solely a preparation for the next stage of education.

At the second level of education also, the expansion of the past decades, with the resulting emphasis on screening and selection, has brought the problem of functional relevance into sharp focus. The contents, structures and teaching methods of most secondary school programmes in the region tend to be geared to the success of those fortunate few who manage the transition to higher education. They do little for those who have to make the transition to the world of work. It emerged from the discussions in the Conference that the diversification policies pursued over the past ten years or so have only begun to remedy this situation. The single track of academic secondary education continues to be dominant in most countries in spite of all attempts to promote diversified forms of secondary vocational, technical and agricultural education as well as teacher training. With regard to vocational and technical education in particular, its share in total secondary school enrolments had declined in a majority of the countries.



Reports by several delegates revealed that secondary education has nevertheless been the object of far-reaching curricular and structural changes. Earlier reforms had sought to achieve a suitable combination of 'terminal' streams leading to employment, and 'preparatory' streams leading on to higher studies. There is a move in current reforms to develop polyvalent curricula which include elements of vocational and agricultural work experience, prior to any specialization on which students may subsequently decide.



Structural measures at the second level are also directed at facilitating access to and transfer between institutions. There is a great deal of experimentation with new forms of secondary education that would be more open in their admission and selection procedures. Significantly, institutions now labelled 'non-formal', such as radio and correspondence high schools, evening and part-time courses, or community schools open to adults as well, are taking a leading part in this advance. Another feature of structural reforms is the introduction of orientation stages at certain strategic points which allow students to specialize in either the academic or the vocational field and create drawing-off points for employment.

In the field of higher education, a slow but sustained transformation has taken place since the Singapore Conference. The statements of delegations strongly emphasized the need to re-appraise the quality, relevance and social context of traditional university and college education in the face of mounting numbers of educated unemployed, proliferating private colleges, and exceedingly high unit costs per student. In many countries of the region, universities have sought to strengthen their contribution to the planning and implementation of national development policies and to endogenous development capacities.

In almost all the developing countries in the region, the enrolment increase in scientific and technological fields of study has been faster in the last few years than in the arts fields of study. Considerable resources are being devoted to the improvement of scientific and technological education. Teaching and research are being streamlined to give greater weight to graduate and post-graduate programmes and to promote applied research. Extension programmes which benefit both the nearby communities and the applicability of what students learn are well on the way to becoming a common feature of higher education.

In addition, closer relationships are being forged with government development agencies and the industrial sector. A number of countries have launched 'open-university' types of institutions in an attempt to create suitable forms of post-secondary education for special target groups as well as for the working population at large. There are initiatives unfolding in several developing countries of the region with a view to evolving

new functions and structures of higher education in order to relate them to endogenous development from which they had been so long alienated. This is an area which offers particularly good opportunities for inter-country and regional co-operation.

The central importance of the teacher's functions remains spotlighted. It is recognized that reforms in the pre- and in-service training of teachers must accompany, if not precede, the pervasive curricular and structural changes now being introduced at all levels of education. To this end, the mere lengthening of pre-service training cycles, the raising of formal qualification requirements, or the frequent practice of elevating teacher training to the third level of education may not be wholly sufficient solutions. A pattern of recurrent teacher education may be needed to cope with continuous change in the roles and skills which teachers are expected to master.



Examination reform is another priority task to which Member States are addressing themselves in equal measure along with the re-orientation of contents, structures and teaching methods. Discussions in the Conference emphasized the need to develop continuous and individualized assessment techniques that may monitor and guide the progress particularly of 'disadvantaged' learners.

Concern with the articulation between education and the world of work was reflected in the course of the Conference. It was recognized that if education is to be made functional and relevant to national development needs, processes of education and work will have to be interlinked more effectively than in the past. Delegates took a critical view of formal education practices which tend to foster 'bookish' learning at the cost of attitude and skill development and separate millions of young people in school from the context of action and work.

National policies of interlinking education and work must be related to the mounting problems of youth unemployment in the region. The documentation presented to the Conference indicated that, in many of the developing countries of Asia and Oceania, the inability of large numbers of school and college graduates to find suitable employment had engendered a sense of social frustration and led to a costly under-utilization of qualified human resources.

While in many instances shortage and over-supply of educated manpower seem to exist alongside each other, the pressure of fast-expanding educational systems upon the employment opportunities has clearly increased in recent years. Secondary education, the prime mover in this expansion, has as a rule shown the least degree of articulation with employment needs, as witnessed by particularly high unemployment figures among secondary school graduates.

A major theme is that of community participation in education. Although the forms of people's participation may vary from one country to another, almost all countries in the region are strongly committed to it. Efforts to gain public understanding and support for educational reforms are but one aspect of a broader strategy, pursued by many countries in the region, to strengthen the interaction between education and the community

of which it is a part. The Conference recognized that greater public involvement in education is vital not only as a means of mobilizing additional resources, but to give to education a broad base of participation, without which its comprehensive developmental purpose will remain unrealized.

The kinds of resources obtained through public participation in education, as well as the strategies employed to mobilize them, cover a wide range. Local communities in many Member States shoulder a considerable part of the capital and operating costs of their schools. They donate land or buildings, offer facilities for on-farm or in-plant training, provide labour and money for the upkeep and improvement of schools, and contribute to sports and cultural activities.

Less common seems to be the deployment of skilled community workers as para-educational personnel, although there are several significant programmes of non-formal and adult education in which the community sources of skills are fully used. In many countries, community participation is channeled through parent-teacher associations or comparable bodies established at district level. In others, it is embedded in broader political and other organizations covering the entire nation. Community support is usually mobilized on a voluntary basis, but may also be enlisted through certain administrative and legal provisions.

The mobilization of young people as an educational resource is a growing movement in the region. Its basis is the realization that community involvement in education can only be sustained if the educated, in turn, involve themselves in the problems of the community. Productive work undertaken as part of or in addition to the regular curriculum has in many countries enabled educational institutions to generate resources of their own, and has become a significant factor in community development. Study service and extension schemes in higher education are as important here as work experience programmes for secondary school students.

These attempts to broaden the resource base of education through the active involvement of communities, youth and industry are essential to the future growth of education in the region. The need for greater economy and cost-effectiveness in the use of existing resources remains, nevertheless. Adequate and

mutually consistent mechanisms of educational planning and management are of key importance in this connection.

The continued expansion of educational systems, on the one hand, and the ever widening range of objectives to which they are geared, on the other, have opened new tasks for established planning and management practices. For example, the increased emphasis in many countries on 'grass-roots' participation in educational planning, on the special learning needs of 'disadvantaged' population groups, and on integrated development schemes for specific regions within countries, have led to a partial decentralization of planning and management responsibilities. The experiences gained in this respect bear careful study. Likewise, such issues as the integration of formal and non-formal modes of education, the role of education in rural transformation, or the challenge of educated unemployment, call for the development of new and more appropriate techniques of educational planning and management.

Performance monitoring and plan evaluation are crucially important in safeguarding economy and effectiveness in educational development. The Conference showed a critical awareness of the methodological and organizational lacunae which persist in this respect. Greater efforts are needed to develop performance indicators for educational systems that would take in aspects of quality, distributive justice and functional relevance, over and above the remarkable quantitative progress of education in the region of Asia and Oceania.



SECTION TWO
EDUCATION IN COUNTRIES OF THE REGION OF
ASIA AND OCEANIA



THE DEMOCRATIC REPUBLIC OF AFGHANISTAN

Review of education from 1971 to 1977

The status of education during the years 1971-1977 in the Republic of Afghanistan was a reflection of the social and economical conditions of the country. The education system had been based on a 6 + 3 + 3 pattern; in 1975 it was changed to an 8+4 structure. The changes which took place between the years of 1971 and 1977 can be studied in two stages: (1) before the educational reform and (2) after the reform.

Primary education. The number of students in primary schools increased from 573,164 in 1971 to 654,209 in the year 1974, reflecting a total increase of 14 per cent, or 3.5 per cent annually. Between the years 1975 and 1977, during which the education system was changed to 8+4, (i.e. when the grades VII and VIII became part of the primary schools) the number of students increased from 784,568 in 1975 to 889,251 in 1977. This shows a total increase of 13 per cent which includes also the increase in enrolments of grades VII and VIII of middle and *Lycee* schools.

Secondary education. The number of students at secondary level (grades VII to XII) increased from 127,162 in 1971 to 167,397 in 1975. This shows a total increase of 32 per cent, or 8 per cent yearly. By implementing the educational reform, secondary education was changed to four years (i.e. grades IX to XII). The total number of students decreased from 87,537 to 86,128.

Vocational education. There were a total of 7,608 students in vocational schools in 1971 and 13,287 students in 1977, showing an increase of 5,679 students during the seven-year period. This increase is mostly in agricultural and technical schools. During this period the number of students in agricultural schools increased from 477 to 2,864 (almost 600 per cent), and the number in technical schools increased from 1,649 to 3,471.

School buildings. Of 3,704 schools in 1977, some 2,009 had their own buildings whereas, in 1971, this was true for only 1,490 schools. Moreover, some of the earlier school buildings were unsuitable for educational purposes; the building programme thus shows to have been very substantial.

Educational expenditure. Although expenditure on education increased two and one-half times during the period under review, the budget for developmental expenditure and teaching materials remained very small. More than 80 per cent of the budget was for the salaries of teachers, officials and other employees. Five per cent was allocated for miscellaneous expenditures, leaving only 15 per cent of the budget to be spent on the development of education.

Although Afghanistan has long been independent, more than three-fourths of the children are deprived of education. In a country where illiteracy is of the highest level, is it possible to eliminate it, without having a cultural revolution? The duration of education has been changed in the name of innovation. Can an increase of two years in primary education guarantee the quality of education?

It was said in connection with this innovation that locally needed skills would be taught in grades VII and VIII of primary schools. But three years after the implementation of the educational reform there was no sign of the introduction of any kind of skill training in any of the primary schools. The basic aim of the educational reform would appear to have been to obstruct the education of thousands of children who were graduates of the eighth grade. By introducing an entrance examination, thousands of students in the country became jobless. In the seven-year-plan of the old regime, not even the establishment of one high school was foreseen.

If one compares the total number of schools with the school-age population the following results emerge: on the basis of statistical estimations by the old regime, the school-age population (6-14) was 3.8 million. Out of this only 889,000 students attended. That was only 23 per cent of school-age children. If we take a look at the proportion of boys and girls, out of 2 million boys, only 37 per cent were in school while 1.3 million boys were not. Also, out of 1.8 million girls, only 8 per cent attended school and 1.6 million girls were not in schools.

On the basis of studies conducted in 1973 the average time taken by a student for the completion of primary education in Afghanistan was 12.5 years, reflecting a very high rate of wastage. Out of 1,000 students of grade I, only 475 students (or just 47.5 per cent) completed the cycle; the rest left the school system before completing primary schooling.

There are no schools in many rural areas. Most nomads, estimated to be around 2.5 million people, are also deprived of education.



Current policy and action

The National Ministry of Education, for the purpose of achieving the goals of the Basic Lines of Revolutionary Duties of the Government of the Democratic Republic of Afghanistan, first of all weeded out from the Ministry of Education's corrupt administrative machinery, anti-revolutionary, anti-democratic elements and elements opposed to the interest of the people of the country. The Ministry then, as far as possible, appointed as department heads of upper and lower levels of education of the country, those elements that are real servants of the people. By so doing, the old administrative machinery was torn down and within two months the task of reconstructing new machinery was completed.

The National Ministry of Education of the Democratic Republic of Afghanistan, right after the successful April Revolution, abolished the meaningless and unintelleçtual "Education Reform" of 1975 and reopened school doors to more than 25,000 graduates of the eighth grade who had been denied the right to study. One *Lycee* was newly established in Kabul and was named *Lycee Ingelab* (Revolution), to provide the children of the country with opportunities for growing and developing their aptitudes. This educational movement won enthusiastic support from every national and democratic stratum of the people. A good example of this is financial support to the extent of some 25 million afghanis¹ and 40 acres of land

1. 38 afghanis = one US dollar.

and a large amount of education material that have been donated by the people from all walks of life. If the three hundred million afghanis and the cost of the buildings donated to the Ministry of Education by the *Banke Mille* (National Bank) are added, the total financial support to those who failed the so-called *concours* examination would reach some 400,000,000 afghanis.

The monthly examination system as part of the meaningless "Education Reform" was becoming an impossible task. It took too much of the teachers' time to prepare examinations, administer them and enter grades in complicated forms. It also left the teacher little time to prepare lesson plans and do a sound teaching job. In any case, the revised system did not show any improvement over the previous system. For these reasons, the monthly examination system was dropped and in its place a system comprising a three-month, six-month and final examination was adopted.

Previously the Audio-Visual Centre was little more than a name and adequate use was not made of it as an educational centre. Now it is being used widely for learning and training purposes.

For the workers of Kabul, Ghazni, Logar and Parwan Provinces, the Ministry of Education, utilizing funds donated by the people as well as those obtained through international assistance, has made preliminary provisions for the building of night *lycees*. UNICEF has provided funds for 5,000 single classroom chairs and 2,000 double desks.

To overcome the problem of teacher shortages, during the last two months approximately 5,000 graduates of grade XII who had completed their secondary education with top grades and honours, and who for many years had been seeking employment within and without Afghanistan, have been recruited and are being employed as teachers. Planning is already underway for on-the-job training of the first group of 500 of these teachers who will receive pedagogic training during the three months' winter vacation. Two thousand additional teachers who had been working as contract teachers have been granted the full status of normal teachers. The only problem lies with 700 girl-graduates of grade XII who are from Kabul and due to the country's unique conditions cannot go to the provinces as teachers. But it is hoped that this problem would be solved in the near future.

The Inspection Department of the Ministry of Education, whose major function had been to inspect the ideological attitudes of the progressive and freedom-loving teachers and students, was dissolved and its professional members were appointed to Kabul and other provinces as a partial remedy for the problem of shortage of teachers.

Afghanistan

For the purpose of orienting the teachers and supervisors of literacy programmes in modern techniques of teaching and in order to show them ways of inter-linking literacy with revolutionary tasks to awaken and enlighten masses of people, a one-week seminar was conducted in Kabul. It is planned to expand such programmes to cover other provinces as well.



In the past two months, funds obtained from the people paid for those who had failed the *concours*. In addition to covering the expenses of these students, the funds paid for the construction of many new schools and for additions to existing institutions.

On 21 June 1978, the cornerstone for the new textbook press of the National Ministry of Education was laid at the industrial site of Kabul. The new Education Press which will be built with 8 million dollars technical assistance from Canada, will be equipped with the most modern machinery and will have about 150 skilled workers working in each shift. When operating to full capacity, the Press will print 10 million textbooks annually. The plant, which comprises 30 thousand cubic metres of building, will be constructed on 7,000 square metres of land. It will take 20 months to complete the building.

Tasks yet to be accomplished

The National Ministry of Education has numerous tasks yet to be accomplished. Priorities have been given to the following:

1. The education system of Afghanistan must undergo a basic change and, as the first step, all curricula must be revised taking into consideration the new goals. To achieve this revolutionary task, revision must be directed towards the present dysfunctional and impractical organization of the Department of Compilation which is also responsible for curriculum-making. Two sub-departments, one for *Uzbeki* Literature and one for Philosophy, Political Science and Economic Studies, have been added to the newly organized Compilation Department. The social studies unit, due to its subject content, has been renamed 'Sub-Department of History and Sociology'.

2. Other tasks that have been undertaken include the translation of the mathematics textbook for grade I into *Uzbeki* language; translation of the policies and objectives of educational systems of a number of progressive countries of Asia, Africa and Latin America, planning and designing of an abstract of contemporary, scientific and progressive literature of Pashto and Dari languages; and photocopying of the "Shortest History of Afghanistan" written by a number of researchers as an experimental first step towards writing and translating the progressive history of the country.

3. The Ministry of Education has taken measures leading to the establishment of academies for social studies and natural sciences. It is also planning to consolidate a number of scattered educational and historical establishments to suit the needs of modern times.

4. Since the successful uprising of April, the Ministry of Education, utilizing local and international assistance funds, has started the work of construction of 657 four-classroom, eight-classroom, 12-classroom and 16-classroom school buildings, and teachers' quarters for primary, secondary and vocational schools throughout the country.

5. In line with the policy of the Democratic Republic of Afghanistan regarding a solution of the national issue, the Ministry of Education will offer education to national minorities in their mother tongues, in school as well as in literacy courses.

6. Since over 90 per cent of the adult population of Afghanistan are illiterate, the campaign against illiteracy will be stepped up in an unprecedented way.



AUSTRALIA

General principles

Under Australia's federal constitution, education is the responsibility of the six State Governments. The Australian Government provides education services in the Australian Capital Territory and the Northern Territory and it also provides supplementary finance to the States for education at all levels and financial assistance to students.

School attendance is compulsory throughout Australia between the ages of 6 and 15 years at least. In all States and Territories the opportunity to attend pre-school beginning at 4 years of age is becoming more widely available. Primary and secondary education is free in government schools in all States and Territories although, particularly in high schools, nominal fees may be charged for the hire of textbooks and other school equipment. Post-secondary education (in universities, colleges of advanced education and technical and further education institutions) has been free since the beginning of 1974.

At the national level the Australian Government provides a number of schemes of assistance for students to facilitate access to education. In recent years considerable efforts have been made at both national and State level to discriminate positively in the provision of educational services for groups which are affected by relative social and economic inequalities within Australian society. The major groups affected in this way are: women and girls; Aborigines and Torres Strait Islanders;





migrants; the handicapped; people living in rural and isolated areas; people living in disadvantaged areas.

In 1975, only 0.1 per cent of government primary schools were single-sex schools. All schools with both primary and secondary enrolments (mainly area or district schools in rural areas) were co-educational. Almost 84 per cent of government secondary schools were co-educational, an increase of 3 per cent since 1973. Three quarters of all non-government secondary schools and over half of those with primary schools attached to them were single-sex schools in 1974.

Tertiary institutions (universities and colleges of advanced education) are autonomous institutions established under acts of the appropriate parliament. For the purposes of funding and rationalization, the planning activities of colleges of advanced education are co-ordinated through State authorities and there has been growing interest in most States in the co-ordination of post-secondary education generally.

Each State has a controlling authority for pre-school education which until recently was largely provided by non-government organizations.

The conditions under which private educational institutions may operate are determined by government authorities in each State and Territory. Approved private schools receive substantial financial assistance from the Australian and/or State Governments but there is no interference in their governance provided they meet minimum educational standards.

National education bodies

A number of bodies at the national level have an important co-ordinating, planning or funding role. *The Australian Education Council*, comprising the Australian and State Ministers of Education, meets at least once each year as a consultative body to consider matters of mutual interest, such as the material and personnel needs of schools and co-operation in educational developments generally. It is assisted by a Standing Committee, consisting of the Director-General of Education in each State, and the Secretary of the Australian Department of Education. *The Conference of the Directors-General of Education* also meets annually.

Four national education commissions: the *Universities Commission*, the *Commission on Advanced Education*, the *Technical and Further Education Commission* and the *Schools Commission* were established as separate commissions during the period from 1959 to 1975 to advise the Australian Government on the financial needs of educational institutions throughout Australia (including non-governmental schools and teachers' colleges).

Financial assistance for both governmental and non-governmental pre-school and child-care facilities is provided to the States by the *Office of Child-Care* within the Australian Department of Social Security. The Office, which was established in 1976, provides policy advice to the Australian Government on child-care matters and encourages the co-ordination of government initiatives in the child-care field. Other important national education bodies are:

1. **The Curriculum Development Centre**, which was established by the Australian Government in 1973 with the co-operation of the States. It became a statutory authority in 1975.
2. **The Education Research and Development Committee** (formerly known as the Australian Advisory Committee on Research and Development in Education). It was established in 1970.
3. **The Australian Council for Educational Research**, which is the only substantial educational research organization in Australia independent of tertiary institutions and government departments.
4. **The Australian Council on Awards in Advanced Education**, which was established in 1971 and, in consultation with State co-ordinating bodies, seeks to establish consistency in awards in advanced education by establishing, maintaining and publishing a register of such awards.

The length of the pre-school programme is in most instances a maximum of one year. The opportunity to attend pre-school is not universal but is becoming more widely available. The provision of a preparatory year in primary schools is now almost universal. The primary school stage lasts either six or seven years, followed by a five- or six-year secondary stage. No qualifications are awarded until the end of the first stage of secondary education (grade X) when in most States a school (or junior) certificate is awarded on the basis of internal school examinations and teacher assessment. In all States a higher school (or senior) certificate is awarded at the end of grade XII. In Queensland, and the Australian Capital Territory, moderated or accredited internal school assessment has replaced an external examination at this level. Partial replacement of the external examination is taking place currently in New South Wales and Western Australia. The matriculation requirements of universities and colleges of advanced education are based on the academic achievement of grade XII. Table 1 gives enrolment figures for the first two levels.

Table 1. Primary and secondary enrolments in Australian schools, 1971-1977

Year	Government	% of Total	Non-Government	% of Total	Total
<u>Primary</u>					
1971	1,451,449	79.7	369,400	20.3	1,820,849
1974	1,456,044	80.3	357,397	19.7	1,813,441
1975	1,463,678	80.5	355,680	19.5	1,819,358
1976	1,487,193	80.7	354,908	19.3	1,842,101
1977	1,517,907	81.0	356,724	19.0	1,874,631
<u>Secondary</u>					
1971	745,122	75.5	241,674	24.5	986,796
1974	801,801	75.4	261,084	24.6	1,062,885
1975	834,301	75.9	265,621	24.1	1,099,922
1976	848,238	75.9	269,911	24.1	1,118,149
1977	846,409	75.6	273,752	24.4	1,120,161
<u>All Schools</u>					
1971	2,196,571	78.2	611,074	21.8	2,807,645
1974	2,257,845	78.5	618,481	21.5	2,876,326
1975	2,297,979	78.7	621,301	21.3	2,919,280
1976	2,335,431	78.9	624,819	21.1	2,960,250
1977	2,364,316	78.9	630,476	21.1	2,994,792

At the post-secondary level the situation is more complex. The basic undergraduate course in most disciplines in a university or college of advanced education is three or four years in length; at the conclusion of this

a degree is awarded. An additional one-to-four years of study in a university is necessary for an honours, masters or doctoral degree. In institutions operating under the Technical and Further Education Commission (TAFE) (and for some courses in colleges of advanced education) a professional or para-professional course of two or three years leads to a diploma. Certificates are awarded for a wide variety of trade and other skill courses. For many shorter or less formal courses, no qualifications are awarded.

Rationalization and co-ordination of educational resources and programmes

The years 1975 and 1976 saw the culmination of a period which had begun several years earlier, and during which expenditure on education increased considerably and consistently as a percentage of the gross domestic product (GDP). In the financial year 1971-72, for example, expenditure on education accounted for 4.7 per cent of GDP. By 1975-76 it had increased to the amount of 6.4 per cent of GDP. In mid 1975, however, in response to economic conditions, the Australian Government decided on the need for budgetary restraint. The decision to limit the rate of growth in educational resources and programmes has been accompanied by a related concern for rationalization and co-ordination, particularly at post-secondary level. The intention for the longer term is to ensure that the benefits from resources invested in education are at a maximum. The moves towards rationalization and co-ordination have occurred both at the national level and within individual States.

It is likely that attempts to rationalize the provision of post-secondary education will be a feature of Australian education in the next few years. During 1975 and 1976, four existing colleges of advanced education in Victoria merged into two institutions (at Ballarat and Bendigo), and in the same State a new university (Deakin University) was founded at Geelong, partly by absorbing an existing college of advanced education. The desirability of amalgamations of other existing institutions, mainly in provincial cities, has been considered by various governments.

In September 1976, the Australian Government announced that it would appoint a committee to enquire into Education and Training in Australia and make recommendations to the Australian Government on the desirable overall pattern of post-secondary education to be developed during the next 20 or 25 years.

Federal inquiry into transition from secondary education to employment

In October 1974, the Australian Education Council endorsed the establishment of a working party to study the 'Transition from Secondary Education to Employment'. The Committee presented a comprehensive

report to the Council late in 1976. The report suggested a number of areas where extensive changes and improvements in existing practices and policies are necessary. Early in 1977 the Council and the Conference of State and Federal Ministers of Labour agreed to establish a Commonwealth/State working party of officers of education and labour to develop specific proposals in the area of vocational preparation programmes.

Other initiatives

A number of education systems changed assessment procedures at the end of grades X and XII. The aim in each case was generally to give schools more responsibility for assessing students at these levels, and to remove or lessen the restrictions on secondary curriculum imposed by external examinations, particularly at the end of grade XII.

A variety of programmes designed to provide pre-employment training and retraining, and other forms of assistance, were developed or expanded on the advice of the National Training Council. The Council is a consultative advisory body comprising representatives of employers, unions, and State and Federal Governments. The two main forms of support on which it provides advice and which are intended to help school leavers (and others) are the National Employment and Training (NEAT) System and various forms of apprenticeship support.

The NEAT scheme, which was introduced in October 1974, is a system of labour-market training designed to assist individuals to:

- make the occupational adjustments needed in a dynamic labour market; and
- overcome their skill deficiencies or related barriers to entry into stable employment.

The current orientation of NEAT is to train those in the workforce who are at risk of losing their employment. From its inception until early 1977, some 32,000 people were approved for NEAT training assistance.

During 1976, a 'Special Incentive for Youth Employment Training' segment was incorporated in NEAT because of the large number of 1975 school leavers who had been unable to find jobs.

Late in 1976 the Australian Government, on the advice of the National Training Council, decided to replace the existing National Apprenticeship Assistance Scheme which provided taxable subsidies to employers for first-year apprentices only, with a new scheme: Commonwealth Rebate for Apprentice Full-Time Training (CRAFT). CRAFT, which became fully effective early in 1977, offers tax-free rebates to employers for:

- apprentices released from work to attend or study State-authorized full-time courses in basic technical education; and

Education in countries of Asia and Oceania

- apprentices undertaking approved full-time off-the-job training. Allowances are also paid for first- and second-year apprentices required to live away from home during their apprenticeship.

CRAFT is intended to encourage full-time, off-the-job instruction of apprentices in training centres or annexes, in order to achieve earlier productivity of the apprentice. CRAFT forms part of an overall strategy designed to bring the technical education component of apprenticeship forward so that it takes place earlier in or even before apprenticeship. Other components of this strategy which attract various forms of assistance are:

- NEAT and Tertiary Education Assistance Allowances for pre-apprenticeship courses;
- accelerated training courses, at present in Victoria only: NEAT allowances are paid to apprentices to complete full-time apprentice courses in less than two years (a one-year saving), thus freeing apprenticeship training facilities to take on additional apprentices in the future; and
- various schemes to increase the number of apprentices employed by government authorities.

In 1975/76, assistance was given to the States for the first time to employ Apprentice Training Advisers who act as liaison officers between the technical colleges and employers to foster greater co-operation and understanding of the training needs of the apprentice and the organization.

A number of other relevant programmes which were introduced during 1975 and 1976 and which are administered by the Department of Employment and Industrial Relations are:

1. The **Relocation Assistance Scheme**, which provides for certain expenses to assist school leavers because of their disproportionate representation among the unemployed;
2. The **Community Youth Support Scheme**, which provides funds to community groups for staff, accommodation and other expenses incurred in providing various job-orientation and other programmes intended to make the young unemployed more attractive to potential employers;
3. The **Educational Programme for Unemployed Youth**, for the development and conduct of a pilot remedial scheme in such subjects as English, Mathematics and Communications for young people under 21 years of age whose educational qualifications are inadequate in today's labour market conditions.
4. **Career Planning Programme**. A career-planning kit was piloted in Victorian and New South Wales schools in 1976 and 80,000 copies

turned out for distribution to secondary schools. It is designed for use in discussion groups and includes a number of activities concerned with:

- a) exploring personal interests and skills;
- b) examining different jobs and the prerequisites necessary for them; and
- c) learning to link personal qualities and aptitudes to the requirements of various occupations.

Curriculum developments

The trend towards decentralization to schools of the responsibility for curriculum development and implementation, within guidelines determined by State and Territorial education authorities, led to substantial experimentation in individual schools throughout Australia in 1975 and 1976. Many of them appear to have involved more flexible approaches to teaching and classroom organization, the development of individualized learning activities, planning and implementing new approaches to the traditional subjects, and planned integrated experiences involving a number of subject areas.

At the national level, the Curriculum Development Centre was formally established by an Act of the Australian Parliament in 1975. The Centre's permanent Council met for the first time in August 1975 and decided that priority should be given to:

1. The provision of a clearing house and information analysis service;
2. Curriculum development research studies;
3. Field development;
4. Projects in social science, environmental education and literacy;
5. Support for the School Commission's emphasis on the education of Aborigines, girls and migrant children.

As a first step in setting such priorities, during 1976 the Centre established seven short-term study groups as follows to establish research and development priorities for action in the next two or three years.

1. Curriculum Evaluation;
2. Mathematics Education;
3. The Operational Curriculum;
4. Support Systems for School-Based Curriculum Development;
5. Mode of Operation and Feasibility of CDC Information Centre;

6. Expressive Arts;

7. Education for a Multi-Cultural Society.

The Centre in the past two years has engaged in a variety of work much of which has broken new ground in Australian education, at least at the national level. It sponsored two major conferences: one in 1975 on Curriculum Development Styles and Structures for Australian Needs, and one in 1976 on Support Structures for Curriculum Development. It commissioned a variety of curriculum evaluation studies, including two on recent national curriculum projects: the Australian Science Education Project (ASEP) and the Social Education Materials Project (SEMP). In July 1976, three national curriculum committees, which had previously operated independently of the CDC, became the CDC's responsibility. The committees are the National Committee on Social Science Teaching, the National Committee on English Teaching, and the Asian Studies Coordinating Committee.

At the State level, at least two State Education Departments—in New South Wales and South Australia—issued preliminary statements which review the aims and purposes of primary schools. Both documents emphasize the common purpose of home, school and community in guiding individual development. Both stress the responsibility of schools to vary their patterns of organization, their curricula, and the degree to which they interact with the community in response to changing needs and pressures. In 1976, the Education Department of Victoria began an inquiry into curriculum services. An important part of the inquiry is to examine relationships between the various divisions and regions within the Education Department in respect of curriculum services, and to make recommendations to clarify these responsibilities. Another important development in Victoria, the passing of legislation to establish the Victorian Institute of Secondary Education, has implications for curriculum development and services. In Tasmania in 1976, the Minister for Education initiated an inquiry into the Tasmanian education system, called the Tasmanian Education Next Decade (TEND) inquiry.

In New South Wales in 1975, a new curriculum for grades XI and XII was introduced. Under the new curriculum, units of study are based on the amount of time a student spends on each subject, and are differentiated only by the degree of depth and breadth of study required. Aggregate marks in each course unit in the external examination at the end of grade XII are scaled to ensure parity of esteem between courses and between students in alternative courses. The New South Wales Secondary Schools Board in 1975 proposed far-reaching changes for the junior secondary curriculum (grades VII-X). The proposals stimulated considerable interest

but a decision on implementation of the new curriculum has not yet been made. Other developments in New South Wales included the appointment of a committee to report to the Ministry for Education on the education of highly talented children in government secondary schools, and the appointment of a working party for the establishment of an Education Commission.

In the Australian Capital Territory, the creation of the Schools Authority led to the separation of junior secondary schools (grades VII-X) and secondary colleges (grades XI-XII), the first of which opened at the beginning of 1975.

Developments in pre-schools

The increasing acceptance by governments of responsibility for providing pre-school education facilities has led to a major development. In some States, during 1975 and 1976, pre-schools were attached to existing primary schools and in some cases, as in Tasmania, the primary school curriculum was extended to a preparatory year. In the Northern Territory, pre-schools and primary schools were fully integrated for the first time. Pre-schools now come under the administrative and professional control of the principal of the local primary school. Since the beginning of 1975, the Western Australian Education Department has been phasing-in a programme of one year of optional pre-school education free of charge. In 1974, the Queensland Education Department began a Pre-School Correspondence Programme, the first of its type in Australia. The programme is aimed at providing a form of home-based, parent-taught pre-school education for children whose families live in remote and isolated parts of the State and who do not have the opportunity to attend regular sessional pre-schools. Lessons consist of a printed programme with suggested activities for parents to use with recorded material on cassette tapes, library resources and a kit of equipment. In 1975, in order to cater for the needs of these children to mix with their peers and to come into regular contact with adults other than those in their immediate environment, the Department introduced the SPAN Programme which is an extension of the Pre-School Correspondence Programme. The SPAN Programme is a 'self-help' scheme in which parents with pre-school children from neighbouring areas come together perhaps twice a week (or as seldom as once a month) to provide opportunities for their children to play with their peers. Play sessions last from two hours to a whole day.

The school and the community

The relationship between the school and the community has been a major element in the context of change in recent years. In 1974, the Schools Commission established a study group to examine problems and

trends within Australia and overseas arising from, on the one hand, the desire of schools to make use of community resources and, on the other, the desire of communities to have access to the physical facilities of the school and to take part in decisions relating to the philosophy and operational policies of individual schools.

A number of significant policy decisions during 1975 and 1976 were intended to encourage schools to adopt a policy of community involvement. The Schools Commission itself has encouraged such developments through several of its funding programmes, particularly those for schools in socio-economically disadvantaged areas, and for schools which have received grants for educational innovations. Several individual government education systems issued documents supporting community use of facilities of schools and those of technical and further education, and setting out guidelines and suggestions to facilitate such use.

In several school systems, the establishment of school councils or boards comprising representatives of the school, parents, the community and, in some instances students, was supported either by policy decisions and legislation or further development of existing arrangements.

In 1976, the Australian Federal Parliament allowed passage of the Australian Capital Territory Schools Authority Ordinance. The Act provides for the establishment of a 15-member Authority and represents the first attempt in Australia to provide for representative administration and decision-making at the highest level of a government education system. The Ordinance also provides for the establishment of a school board in every school.

Strengthening the role of the Australian Education Council

The Council, at a meeting in July 1976, reviewed its functions and those of its Secretariat and emphasized its responsibilities and concern for all levels of education and for their effective co-ordination. The Council, whose members are the Federal and State Ministers for Education, is a major advisory body to State and Federal Governments on policy matters in education. It is adopting a revised set of functions to give effect to this advisory and consultative role. As a result of the review, the Council has recommended to State Governments the establishment of a full-time Secretariat.

During 1975/76 the Council discussed many of the major matters which are currently of concern to education authorities within Australia such as the following:

1. The need for more effective co-ordination of resources in post-secondary education institutions;

2. Relations between the Federal and State Education authorities, particularly as they are affected by the funding policies and programmes of the national education commissions;
3. Developing a policy to ensure that the prospect of a significant oversupply of teachers in future years does not occur, or at least is kept to a minimum. The likely excess of supply over demand for teachers is the result of a declining national birthrate and a reduced rate of teacher resignations;
4. The development of programmes to improve career guidance in schools and the services to young people making the transition from school to work or further study;
5. *Rétention of satisfactory standards of achievement in literacy and numeracy as schools take increasing responsibility for curriculum development and student assessment at all levels, and as society's and employers' expectations rise;*
6. The instillation of a standard nomenclature for all 12 school years in all education systems to minimize problems of placement of students transferring from one State to another;
7. The desirability of a national scheme to facilitate the transfer of teachers from one education system to another without loss of seniority and rights;
8. A survey of the total resources needed by schools in all States to achieve acceptable standards.

Administration and financing

Substantial changes in educational administration and in the mechanisms of educational financing either occurred or were being planned during 1975 and 1976. There were also some related developments in educational planning.

Administrative changes and restructuring occurred in the majority of TAFE authorities. In some cases these reflected the priority which is now being given to the further education component of TAFE, as well as the commitment of education authorities to decentralization of responsibility to college councils for matters such as the development of closer links between colleges and the needs of the community.

In New South Wales during 1976, regional councils for technical and further education were established in the Hunter and Allawarra Regions. In other cases, the restructuring of administrative arrangements was designed to improve educational and student services and (in Tasmania, for example) to strengthen links within the Education Department between all levels of education from infant to technical and further education. The

Education in countries of Asia and Oceania

New South Wales Government appointed in 1975 an Under-Secretary within the Ministry of Education to strengthen the role of the Ministry in co-ordinating and promoting consistency in policy and other advice flowing to the Minister. Also in 1975, the South Australian Department of Further Education initiated a planning service through its Research Branch which is expected to enable it eventually to predict future demand for further education using detailed demographic and related surveys and statistics.

Schools

A number of significant changes in the administration of school systems either took place, or were being prepared for, during 1975 and 1976. Two complementary developments which advanced significantly in most systems during those years were: (1) decentralization of administrative responsibility for certain functions to regions and schools, and (2) the restructuring of head offices in Education Departments to reflect common functions, rather than levels of education.

1. Decentralization. Regionalization of educational administration has been developing in some States (for example, in New South Wales and Queensland) for many years. The impetus for change in recent years has been in response to a belief in the desirability of fostering the school community and in the capacity of persons close to the source of demands to analyse best the requirements of the community, parents, teachers and students. Such decentralization is generally coming to include matters such as: interpretation and implementation of State-wide policies at the regional level, including the provision of feedback and new suggestions to the central office; responsibility within specified guidelines and delegations for school maintenance and minor works, staffing, school transport, conveyance allowances, teacher housing, primary to secondary (or technical) school transition, school zoning, ethnic communication and community relations, in-service education and supplementary grants to schools.

Some major developments in decentralization occurred during the mid-1970s. In New South Wales for example, Regional Offices gained increased responsibility and the delegated responsibilities of Regional Directors were extended to include the placement of teachers with proven performance and potential on the lists of teachers eligible for promotion to a position of school principal or assistant principal. In Victoria, the Education Department achieved in 1974 full regionalization of the State. Progress towards regionalization was made also in South Australia, Western Australia and Tasmania. Five regional offices—to be further increased by two—had been established in South Australia. The Western Australian Department of Education appointed regional administrators for the remote

Kimberley and Pilbara Regions in the north of the State. In Tasmania, full regionalization has been in operation since 1973.

2. Functional restructuring. Restructuring of Education Departments and other education authorities occurred to some degree in all systems. In South Australia, Western Australia and Tasmania the divisions responsible for primary education and secondary education were abolished and replaced by a Directorate of Schools (South Australia), of Schools and Services (Western Australia) and Schools and Colleges (Tasmania). Other divisions which were created were for Educational Facilities (South Australia), Resources Staffing and Planning (Western Australia) and Services (Tasmania). Curriculum and other superintendents working at the regional or State level will also be concerned with matters affecting the education of the child from grade I to grade XII, rather than being restricted to the primary, secondary or technical division, as had usually been the case.

A number of major administrative changes were made in Victoria. New positions of Assistant Directors-General for Personnel, Curriculum and Planning, and Management and Finance were created to strengthen the high-level formulation of policies within the Department of Education. A Ministry of Special Education was also established. The Minister is responsible for day training centres and other educational institutions and services catering for handicapped children, and assists the Minister of Education in relation to general Education Department activities.

3. Planning. Most of the changes which have been referred to are intended to facilitate planning services and functions within education authorities. The New South Wales Education Department decided in 1976 to appoint research officers to its regional offices. In the Australian Capital Territory, the Schools Authority began to encourage schools to adopt forward planning approaches. A number of school planning conferences were organized and in 1976 the Authority decided that each school could use up to four days within the school year for school planning conferences. These conferences have allowed schools to plan curriculum development, to evaluate programmes, and generally to involve the school community in planning. At the system level, six advisory Standing Committees were set up in 1975 to advise the Authority Council on administration and finance, staffing and establishment, buildings, education programmes, special education and general purposes. The Committees are representative of the Council, the Schools Office, teachers and parents.

A significant development was the passage of legislation in 1975 by the South Australian Parliament to establish the South Australian Council for Educational Planning and Research. The Council, which began work

in 1975, is responsible for conducting or commissioning the conduct of investigations and research into the provision of educational services and the use of educational resources; promoting the development, rationalization and co-ordination of educational services; and co-operating with other authorities for these purposes.

Pre-schools

Approximately three-quarters of pre-schools in Australia are run by non-government agencies which are eligible to receive financial assistance from the Australian Government. The Government announced in 1975 that recurrent financial assistance would be restricted in future on a needs basis to pre-schools which agree to integrate and extend their services to provide for a variety of needs in conjunction with related community services such as health and welfare programmes. Such services could include full day care, care during holiday and outside school hours, sessional pre-schools, play groups, child-care co-operatives, family day care and toy and book libraries. In November 1976, the Australian Minister for Social Security announced that, from 1 January 1977, preference would be given to pre-schools which gave maximum support to children in need.

Finance

Expenditure on education as a percentage of both the gross domestic product (GDP) and the total public sector outlay on all purposes has increased substantially. For example, total expenditure on education rose to 6.4 per cent of GDP in 1975/76 compared with 5 per cent two years earlier. Public expenditure on education in the same period rose from 15.6 per cent to 16.6 per cent of total public expenditure. In round figures, 63 per cent of public expenditure on education in Australia for 1975/76 was allocated to schools and pre-schools, 12 per cent to universities, 9 per cent to colleges of advanced education and teachers colleges, and 6 per cent to technical and further education. Expenditure for other purposes, such as student assistance and research, accounted for 10 per cent of total outlays.

During the period under review, the comparative advantages to be gained from expenditure on lower secondary, upper secondary and the various post-school levels of education became an important consideration. Future planning and review will need to be concerned with rationalization of facilities and increased attention will need to be given to the needs of the labour market.

EDUCATION IN BANGLADESH

Introduction

Bangladesh is almost entirely a land of broad rivers and smaller waterways, and the low-lying lands in between. More than 80 million people are squeezed into a piece of land with an area of less than 500-by-300 kilometres. Its physiography has made Bangladesh vulnerable to environmental hazards which in turn have adversely affected the educational activities in the country.

The education system of Bangladesh cannot easily be described on the basis of a theoretical model. Like most countries, it has three main levels: primary, secondary and higher education; the second level can be sub-divided into junior secondary, secondary and higher secondary. Outside the main stream of education, however, there is another significant type of education, namely the religious education which is provided by the *Madrasahs* of different types offering elementary as well as advanced levels of education in the religious field. There are over 1,500 *Madrasahs* with an enrolment of 0.3 million in the country.

The educational system in Bangladesh is possibly unique in the world in its finance and management structure. Depending on the level of education, the vast majority of the schools are either under private management and mainly privately financed or under the management of the government and largely financed by the government. Primary schools and the universities are in the main publicly financed, while junior secondary, secondary and higher secondary schools, including degree colleges, are privately organized.

Primary education

The primary school is the lowest tier of the education system. The expansion of enrolment at the first level during the last couple of decades has indeed been impressive, having more than trebled from 1949 to 1978. During this period it rose from 2.5 million to 8.5 million. Seventy-five per cent of the primary-school-age population are now enrolled and one third of the pupils are girls. This population, however, shot up from 6 million to 11.7 million during the period. Consequently, the absolute size of the out-of-school population of the relevant age group (6 to 11) has remained virtually the same. It was 3.42 million in 1949-50 and is about 3.00 million now.

It is noteworthy that the literacy rate increased by 8 per cent—from 16 to 24 per cent—in 20 years. Yet in spite of this increase the total number of illiterates also went up during the period. This simply underscores the point that Bangladesh, with its very rapid population growth, must run very fast just to maintain the position with respect to proportion of the educated population. The principal objective of primary education in Bangladesh is hence to accelerate the rate of growth of literacy in order to outstrip population growth and thus set the stage for universal primary education.

Achieving the goal of universal primary education—a pressing demand—is nevertheless proving more difficult, as the size of the school population is becoming larger every day. If the number of children in Bangladesh had increased at a more modest rate since 1950 the massive increases in enrolment that have taken place would have been enough to provide universal primary education by now.

There are over 40,000 primary schools in the country. While almost all primary schools were privately managed before liberation, nearly 37,000 of them have now been taken under government management. The average size of a school is about 250 and classes usually have at least 50 children each. On an average, from four-to-five teachers are allocated to such a primary school. About 75 per cent of those enrolled in primary schools drop out before the end of grade V; nearly 50 per cent leave after the first year. The pressure of enrolment results in a quality decrease: in a country where population growth is fast, quantitative expansion becomes inevitable. This in turn undermines quality.

In order to improve quality, the Two-Year-Plan of Bangladesh for 1978-80 seeks to make primary-school pupils production-conscious by imparting development-linked functional literacy and thus to make 'change agents' of the students. To achieve these objectives, generous provision has been made for the orientation of primary schools towards agriculture. Primary schools are also being provided with reading, writing and audio-visual materials, and other teaching aids.

The shortage of trained teachers is one of the principal handicaps to primary education in Bangladesh. Nearly 30 per cent of all primary school teachers are still untrained although the rest have received formal training. While this is a significant improvement compared to 20 years ago, much of the training received is still inadequate and not entirely relevant to their needs. It is felt that the duration of the primary-school teacher training course should be two years instead of one, and the course contents should include science and agriculture. The adverse teacher-student ratio is also a marked obstacle to qualitative improvement at the primary level.



It is increasingly realized that the rapid expansion of education resulting from growing public demand, coupled with increasing population pressure, has resulted in some deterioration in the quality of education. The development of teacher education in Bangladesh has therefore come to mean quantitative expansion—and qualitative improvement has proven to be one of the most elusive of all educational endeavours. A teacher is no longer the primary source of information and today his more important function is to organize new knowledge for his students to match the developments in modern science and technology. A major effort is underway in Bangladesh to replace the old pattern of teacher education by a new one; namely, to educate the teachers in such a way that after they have completed their training, they can themselves further develop and supplement their academic and professional knowledge in line with technological developments in their field.

The overwhelming poverty of the people is by far the biggest constraint in the attainment of universal primary education. When a child goes to school his earnings are forgone and this constitutes the opportunity cost. The cost may appear small but in reality it is very large to

Education in countries of Asia and Oceania

those who are on the margin of subsistence. Moreover, the children of the rural areas are most severely affected by malnutrition, which hampers their motivation and abilities to concentrate and learn. Famished children with insufficient protein, vitamins and minerals in their critical years of growth cannot begin to avail of the opportunities of free primary education. Thus malnutrition is one of the factors responsible for the high drop-out rate in the country.

Women's education in Bangladesh lags far behind that of men. Women constitute over 48 per cent of the total population of the country but their literacy rate is only 15 per cent, compared to about 32 per cent among men. Nevertheless, attempts have been made to develop women's education in the country in order to put them on equal footing with men. In the First Five-Year Plan (1973-78) efforts were made to identify the high incidence of female illiteracy. It was confirmed that no programme of universal primary education would be possible unless the retention of girls in the educational institutions was increased substantially through incentives and improved motivation. In order to increase the enrolment of the girls in the primary schools, provision was made for appointment of at least one female teacher in each of the primary schools of the country.

Although the education system of Bangladesh suffers under the pressure of population, efforts were made in the First Five-Year Plan to improve the quality of primary education. Efforts were also made to develop a broad-based and uniform system of primary education covering the entire country, for the talents of a nation are randomly distributed. Bangladesh does not wish to accept the view currently held in some quarters that the choice before the country is quality education for a few or indifferent education for the many. The former is unjust and the latter generates a kind of runaway educational inflation which is socially unproductive. Bangladesh is therefore still aiming at quality along with quantitative expansion. It may be a difficult and expensive choice, but there is hardly any other option.

The current Two-Year Plan (1978-80) seeks an increase in enrolment of 500,000 from 8.5 million to 9.0 million. There is a provision of some 223 million Taka for primary education, which constitutes 13.22 per cent of the total outlay for education.¹ The enrolment of girls is to increase at an accelerated rate. In addition to the primary schools which have already been nationalized, 3,749 primary schools now in private hands would be brought under government management.

1. Taka 15.55 = US \$1

Secondary education

The output of primary education is the input for secondary. Consequently, with expansion at the primary level, secondary education in Bangladesh has also considerably expanded. Secondary education is looked upon mostly as preparation for higher education. As indicated earlier, secondary education consists of junior secondary, secondary and higher secondary. Junior secondary schools (VI-VIII) lead to the two-year course (IX-X) leading to a Secondary School Certificate Examination taken at the end of grade X.

At present, there are 8,327 secondary schools in the country, of which 132 are Government-managed. There is an enrolment of 1.94 million students in the secondary schools of which 0.49 million are girls. Ninety-five per cent of the total of 1.94 million students are enrolled in non-Government schools. The total number of teachers in the secondary schools is 80,000 and the majority of them are untrained.

Most of the students in the general secondary schools have opted for the humanities courses with a small minority in courses in science and vocational education which include the compulsory common basic subjects. The curricula and textbooks in these schools tend to be unimaginative and urban-biased and as such the quality of education at secondary level is generally poor. Moreover, there is a wide disparity between the Government and non-Government schools in respect of the quality of education. In non-Government schools quality is lower because teachers in these schools are mostly untrained whereas teachers of Government schools usually have some training. Further, Government Schools are relatively well equipped.

Secondary education is indeed a vital component of the education system. It is the keystone to development as it supplies mid- and lower mid-level manpower for the production process in spite of its being too geared to preparation for higher education. The attainment of universal primary education largely depends on the ability of the secondary schools to provide the primary schools with the requisite number of teachers. Finally, the secondary schools do supply the students for higher education who ultimately become the high-level manpower needed for the economy.

The First Five-Year Plan envisaged certain targets for secondary education, keeping in view the manpower requirements of the different sectors of the economy. The targets could not be achieved in full, due to resource constraints, a shortage of qualified teachers, equipment and other inputs. The Two-Year Plan aims at consolidating the existing facilities and improving management and quality. A modest enrolment target of 257,000 additional students has been fixed in the Two-Year Plan. It is

Education in countries of Asia and Oceania

also proposed to introduce vocational courses in the secondary schools of Bangladesh to make the graduates of these institutions employable. Just as the courses in primary schools have been designed to orient the children towards agriculture and rural cottage industries, similar courses in more elaborate form will be provided in the secondary schools.

By far the most important objective of the Two-Year Plan is to raise the quality of education at the second level and modify the enrolment pattern significantly. Diversification of the enrolment pattern would facilitate the absorption of school leavers in the labour market. Fifteen per cent of the enrolment in the secondary schools is expected to be in vocationally-oriented courses. As science is a prime requirement for most occupations, the ratio of students enrolled in science will be raised from 28 to 35. These measures will, it is hoped, ultimately redress the rural-urban imbalance now existing in the country.

Yet another redeeming feature of the Two-Year-Plan is that the salaries of teachers of 700 non-Government schools which have been brought under development would be suitably subsidized by the Government. A raise in the scales of pay of non-Government school teachers will remove the disparity between the Government and non-Government secondary schools of the country by phases. The Government policy with regard to secondary schools consists of greater monitoring, guidance and assistance than has been the case in the past.

The fact that, in the past, teacher training did not receive as much attention as it merits does not mean that the quest for quality in secondary education should be abandoned. While the programme of full-time training for a larger number of teachers is being geared up, attempts are also being made to fill the gap by providing short-term training of various forms and duration during vacation and during other appropriate time.

Instruction using radio and television which, on a modest scale, has been arranged to supplement the teaching in schools will also upgrade the knowledge of the teachers. In addition, provision has been made for supply of teaching materials, maps, charts, film strips and a host of equipment for specialized courses at the secondary level. An allocation of Taka 287.6 million (i.e., 17.04 per cent of total plan allocation) has been made in the Two-Year Plan to cover the expenses for the programme outlined above.

Teacher education

A school system is only as good as the teachers it provides. Teachers must be able, well-trained and motivated for their work. They must be selected on the basis of their qualifications, interest, aptitudes and training in teaching. The teacher training scene in Bangladesh is not, of course,

entirely satisfactory. The total number of secondary teachers is approximately 80,000; among them, around 50,000 are college graduates. Some 32,000 of these have not been trained as teachers. With the increase in enrolment, the position seems to be worsening.

There are ten Teachers' Training Colleges, each with a capacity of about 300. The Two-Year Plan envisages for teacher education—besides marginal expansion of the physical facilities, including laboratories—consolidation of the gains already made. Provision has been made for the modernization of syllabuses to make them relevant and innovative. Moreover, an Education Extension and Research Institute is being established in Rajshahi to cater to the in-service training of secondary school teachers. An Academy for Fundamental Education has also been established in Mymensingh for evolving suitable courses for teacher trainers and educational administrators in the field of primary education and non-formal education. The Institute of Education and Research of Dacca University, which is the apex of the training system, offers Diploma, Master's and Ph.D. courses in Education. This Institute also undertakes action research, and applied and fundamental research on the problems of education relating to Bangladesh.

An amount of Taka 122.35 million has been allocated for the development of teacher education during the Two-Year Plan.

Higher education

The colleges. In Bangladesh, grades XI and XII—which actually form a component of secondary education—are traditionally treated as a part of college education. These grades are generally taught in the intermediate colleges and in the intermediate sections of the degree colleges. Consequently, higher education in Bangladesh consists of education imparted in colleges as well as in the six Universities of the country. The degree colleges provide two years' instruction leading to a pass degree in Arts, Science or Commerce to those who have obtained the Higher Secondary Certificate.

There are presently 588 colleges in Bangladesh, with an enrolment of 381,000 students—of which 50,000 are estimated to be female. Among these colleges, 553 are non-Government. The vast majority of the intermediate and degree colleges are private institutions, and the standard of many of them is generally acknowledged to be unsatisfactory. The prescribed syllabus, level of instruction provided and the standards of examination for the pass degree result in degrees of poor quality. Most of those passing such degree examinations, unless they receive further training in a university, cannot aspire to a good position in Government, industry or teaching. It is this fact which has led students, as well as the authorities

Education in countries of Asia and Oceania

of degree colleges, to press for affiliation of their colleges to institutions offering three-year Honours courses. Quite a number of colleges have now been allowed to offer such courses. Nevertheless, there is still a wide gap in the standards of Honours teaching between the colleges and the universities.

To ameliorate the situation prevailing in the field of college education, the Two-Year Plan aims at raising the standard of the 17 non-Government girls' colleges and 174 other non-Government colleges to that of the Government colleges. The Two-Year Plan also proposes to restrict the expansion of enrolment in the humanities by providing facilities for improved teaching of science, commerce and home management. Special attention has been given to increasing the number of female students in the colleges.

In addition to consolidating and utilizing to the maximum the existing facilities, the Two-Year Plan proposes to create new facilities in the existing colleges—particularly in Science, Commerce and Home Economics. Finally, it is proposed to up-grade four of these colleges, which already offer Three-Year Honours Courses, into University Colleges. An amount of 138.40 million Taka has been allocated in the Two-Year Plan for College Education.

The number of students applying for entrance to the Universities and also the total number of students indicate the social demand for higher education. This does not, however, necessarily indicate society's manpower requirements for social and economic development. Enrolment policy at the higher education level ideally should be based on a pragmatic combination of four different criteria; (1) the private demand for higher education; (2) full development of the natural pool of ability; (3) the capacity of society to provide the educational facilities at this level and (4) manpower requirements of the society.

For reasons both numerous and varied, social demand grows faster than manpower requirements. This situation leads to unemployment of the educated. The reasons for increased demand for higher education are: (a) the population explosion, which acts as a quantitative multiplier of the social demand and (b) mounting aspirations of parents and their children. Two of the reasons for the growing demand for higher education are: (1) there is high social status and value attached to a university degree, and (2) there are not enough job opportunities for young people so that many of them enter higher education as an immediate alternative to employment or a constitutional refuge for the unemployed.

The universities. There are six universities in the country, of which three are affiliating-cum-teaching universities and one is purely residential. Two universities, one for Engineering and Technology and the other for

Agriculture, cater to the needs for professional education. During the Two-Year Plan period, an Islamic University is to be established. Further, four degree colleges are to be upgraded to University Colleges. These Institutions ultimately will be developed into universities. The three general universities of Dacca, Chittagong and Rajshahi affiliate 266 degree colleges all over the country and conduct examinations and confer degrees on the successful candidates.

The enrolment in the Universities was estimated at about 33,000 in 1978, of which 4,171 were enrolled in the two professional universities (Engineering 1,800, Agriculture 2,371). Of the 29,000 students enrolled in the general universities, 8,023 were in sciences.

The rising demand for higher education is also reflected in female enrolment in the Universities. The total female enrolment increased from 2,415 in 1969-70 to 5,202 in 1973-74, i.e., by more than 115 per cent. By 1978 it had reached 7,544, or nearly 25 per cent of total. This enrolment of women is still considered low.

The major causes of rising student enrolment in the universities in Bangladesh, then, are rooted in the structure of education and a number of other factors, demographic, historical, social and economic. One of the causes which readily attracts attention appears to lie within the educational structure which is organized sequentially in a lock-step system of three tiers; primary, secondary and tertiary (higher). The normal production function of this system leads the output of one stage to become the input of the next higher stage. So an important characteristic of the production function of education is that the expansion in a given educational level has the effect of increasing the demand for education at the next higher level and the weaker the base of the higher level of education, the faster the demand tends to grow.

The Two-Year Plan envisages an additional enrolment of 2,617 students of which 1,500 will be in science, 829 in professional courses (Engineering and Agriculture) and only 288 in the humanities. The First Five-Year Plan visualized the enrolment ratio between science and humanities to be 40:60. This could not be achieved during the Plan period. The Two-Year Plan aims at bringing the enrolment ratio from 28:72 to 40:60 as between science and humanities to ensure the necessary supply of high level manpower for the economy. A sum of 221.57 million Taka has been earmarked for university education during the Two-Year Plan. This is 13.2 per cent of the total outlay in the Education Sector.

Technical education

Technical education is a small but fast-growing sector in Bangladesh. In addition to the two professional Universities, namely, the University of

Engineering and Technology at Dacca and the Agricultural University at Mymensingh, which seek to produce high-level manpower in their respective fields to meet the needs of the economy, there are three Engineering Colleges, 19 Polytechnic Institutes and 50 Vocational Training Institutes in the country. There is also an Agricultural College affiliated with the Agricultural University. While the University of Engineering and Technology offers post-graduate degree courses, including Ph.D., the Engineering Colleges offer Bachelor degrees in engineering. The Polytechnics and Vocational Training Institutes offer respectively diploma and certificate courses in various technologies and trades. Enrolment in the Engineering University, including the Engineering Colleges, is about 4,000. Enrolment in the Polytechnics is about 15,000.

The Two-Year Plan aims at the establishment of a Women's Polytechnic Institute and 50 Rural Vocational Training Institutes.

One of the major problems of technical education is the shortage of qualified and trained technical teachers. In order to overcome this shortage, it is proposed to establish a Technical Teachers' Training and Staff College during the Two-Year Plan. Unemployment among technicians has been observed for some time. Various measures are proposed to adjust the curricula of the technical institutes to the socio-economic needs of the country.

Introduction of new curricula and syllabuses

The curricula and syllabuses at the first and second levels of education have not been thoroughly revised for some 15 years. In the light of the long-felt need for reorientation, a National Curriculum and Syllabus Committee was formed in late 1975. Education, a vehicle of national development and an instrument of training manpower, remained neglected in the past. A practical approach was not adopted for a goal-oriented, work-oriented and dynamic education system which could ensure freedom from the troubles of poverty, unemployment, deteriorating values and illiteracy. The National Curriculum and Syllabus Committee, consisting of the cream of intellectuals among the educators of the country, aimed at creating an educational environment where the healthy growth of the future generation would be ensured.

The new syllabus for the first level (grades I to V) has been approved by the Government and is being implemented in phases. The curriculum aims at the resurrection of values in individual and national life. Since there is a need to check deteriorating values in order to restore honesty, sense of justice, perseverance, discipline and sense of duty, the need for moral and religious teaching has become evident. Religious teaching has therefore been made compulsory from grade III to grade VIII and moral

teaching introduced in grades I and II. The new curriculum gives more emphasis to the teaching of science and technology, technical and vocational education and work-oriented education like health, agriculture and crafts. The new curriculum for grades VI-X is now being examined by the Government prior to approval and introduction in the schools.

Experiments in rural education

Integrated rural development is a major concern of the Government in Bangladesh today. This development is to be attained through a process of self reliance; the people themselves must try their best to make use of the unused and under-utilized resources around them and change their lives into forces for development. The self-reliance movement has caught the imagination of the people, and education has made its contribution to the awakening of this spirit. Bangladesh has developed its own approach towards rural development through what is known as the Comilla approach.



The Bangladesh Academy for Rural Development, Comilla, undertook experiments to study the effects of the introduction of rural schools through a pilot-school project. The way of working began with conferences with the Headmasters for the purpose of relating schools to the

Education in countries of Asia and Oceania

needs of the society. This led to the formation of youth clubs and parent-teacher associations, co-operative projects run by pupils, and the establishment of a small museum for displaying local agricultural and cottage-industry products and other activities.

In January 1976, the Ministry of Education launched an innovative programme to improve the quality of education at the first level. The object was to make primary education attractive to young children through learning from their own environment so that the large number of drop-outs could be reduced. An innovative curriculum was developed and programmes for the training of teachers were undertaken. The experiments were conducted for three months; 500 primary schools involving about 2,500 teachers and more than 100,000 pupils participated in activities outside the classrooms according to a planned time-table. The project was able to create general interest among the pupils, the teachers and the members of the community. It broke the monotony of routine learning and involved the students directly in activities in their own environment.

Introduction of population education

To facilitate the introduction of population education in the formal education system of Bangladesh, a research project was undertaken by the Institute of Education and Research, Dacca University, at the instance of the Ministry of Education. The research on population education was a pilot study which started in July 1974 and continued in 55 rural secondary schools involving 6,000 students. The object of the project was to develop and test population education materials for teachers and students and determine strategies for introducing the subject in the formal school system. The findings of the study indicated that some success had been achieved in respect of the objectives of the project.

Population education is now being introduced in the schools of Bangladesh. The aim is to produce informed and socially responsible citizens who would be able to make sound decisions in their personal, family, community and social life on issues related to population. Training programmes are being organized for teacher educators and other key personnel involved in teacher training. The programme also aims at giving training in population education to 40,000 primary school teachers, 8,000 secondary school headmasters, 600 college teachers, 700 heads of vocational and technical institutes and about 400 field officers of the Education Directorate.

Adult literacy programme

The Government is particularly concerned with the great task of removing illiteracy among adults and out-of-school youths. There are about 1,300 adult education centres all over the country; about 500 of these are exclusively for women. Books specially written for the adult learner have been distributed widely and the people themselves have been encouraged to learn to read.

Night schools have been set up at many places with the local administrations observing them to ensure that they make progress. On an average, there is one primary school in every two villages in Bangladesh. The Managing Committee of each of these primary schools has been enlarged to include persons of influence locally. The enlarged committee has been assigned the task of providing education to adults of the village.

A 'Union Parishad' is the lowest local Government body with elected representatives. Each Union Parishad is starting one or more adult education centres, run on a voluntary basis by the people themselves. The Union Parishads are also trying to involve the few educated women members of the village community in a programme which aims at imparting non-formal education to women and children of the village. This is also expected to help the efforts at introducing the concept and techniques of family planning and child care among the women folk.

The kind of education designed for adults is functional in character. It is not mere literacy nor is it rudimentary knowledge of life. It combines literacy and technical know-how, encourages productive schemes and introduces technological innovations; it creates a sense of identity as a nation and creates a new value system appropriate to development programmes.

Non-formal education

Non-formal education seems to be the most effective way to bring education to adults and out-of-school youths. This is also important in Bangladesh because of the close links between education and rural development. Non-formal education is not conceived as an inferior alternative to formal education, but is looked upon as an effective instrument for manpower development, and is closely and clearly linked to the national developmental aspirations of the country. The non-formal education programmes in Bangladesh aim at providing skills to out-of-school youths and adults, at spreading mass education, removing illiteracy and relating education to developmental needs through the use of educational technology.

Education in countries of Asia and Oceania

Two hundred community workshops are being established for improving the skills of out-of-school youths who have had little or no formal education. Literacy schools, apart from acting as educational units, also serve as centres of community service to be rendered by college students. Literacy schools are to be opened in 500 colleges. Workers' school will be organized in mills, factories and other industrial units. Radio and Television broadcasts will also be widely utilized to supplement knowledge gained through printed materials and other sources. Non-formal education programmes will cover both those who have not been to formal institutions, and those who need further and continuing education. There is a National Council for the formulation of policies and co-ordination of programmes in the area of non-formal education.



THE SOCIALIST REPUBLIC OF THE UNION OF BURMA

Introduction

Since 1971 significant developments in education have taken place in the Socialist Republic of the Union of Burma, along with some reforms and reorganization of the education system. These developments and reforms have important implications in terms of the provision of equal access to education, the interlinking of education and productive work, the eradication of adult illiteracy and enhancing efficiency in the utilization of resources. The purpose of this chapter is to review progress and development in the field of education in Burma since 1971 with particular reference to major reforms and the reorganization of the education system initiated in recent years, together with an outline of future plans and programmes.

Educational structure and institutional framework

In the Union of Burma the system of education was re-organized in 1964 and since then a 'New System of Education' has been in force. The components of the New System comprise: (1) 'Basic Education'; (2) technical, agricultural and vocational education; and (3) higher education.

The Basic Education component consists of primary school, lower-secondary or middle school and upper-secondary or high school. The primary-school cycle is of five years' duration (pre-primary or infant class plus grades I to IV); entrance is at the age of 5. Primary school is followed by the lower-secondary school or middle school of four years' duration (grades V to VIII). Following middle school is the upper-secondary or high school, of which there are three types: the basic education high school, the technical high school and the agricultural high school. The upper-secondary school or high school is of two years' duration (grades IX and X).

At the post-secondary level, Government institutes provide technical training in industrial technology (Government Technical Institute) and in agriculture (Government Agricultural Institute). At a similar level, teachers for primary and middle schools are trained in teacher-training institutes and teacher-training colleges respectively. Other post-secondary education is given in universities and university-level institutes; the courses

last between four and six-and-one-half years. There are also 'loops' for educational recuperation enabling students to pursue higher education after they have proved their calibre.

Two important national examinations are held at the Basic Education level: (1) Basic Education Middle School Examination; (2) Basic Education High School Examination. The Middle School Examinations are held at the last year of the middle school cycle and provide the means to direct students into the Science and Arts Streams of the High School. Examinations in the High School are held during the last year of the cycle and constitute an important factor in determining entrance to universities and university-level institutes.

Prior to adoption of the New System there existed the University of Rangoon and the University of Mandalay with their affiliated colleges. Under the New System the number of universities and university level institutes was raised from two to ten, with seven affiliated colleges. The Rangoon Arts and Science University and Mandalay Arts and Science University, under the New System, offer courses to students majoring in one of the Arts or Science subjects. The other university-level institutes are 'professional' in character, offering courses in specialized disciplines such as medicine, veterinary science, engineering, economics or education.

Of the ten universities and institutes and the seven affiliated colleges which came under the control of the Ministry of Education, the Institutes of Medicine and Dental Colleges were later transferred to the control of the Ministry of Health. In addition, a Defence Services Academy under the Ministry of Defence also came under the University System.

The Ministry of Education consists of six distinct departments:

1. The Department of Basic Education,
2. The Department of Technical, Agricultural and Vocational Education,
3. The Department of Higher Education,
4. The Examination Board,
5. The Educational Research Bureau, and
6. The Burmese Language Commission.

National policy for educational development

A decade after the introduction of the 'New Education System', the Burma Socialist Programme Party reviewed and appraised the system in 1974 and, in the light of its findings, formulated and adopted 'Educational



Policies' which were in consonance with the requirement for socio-economic development of the country. Educational Policies embrace five major areas: (1) Basic education; (2) technical, agricultural and vocational education; (3) higher education; (4) educational research; and (5) general.

Basic education. Educational policies relating to Basic Education include, among other things, the following:

1. Enforcement of compulsory primary education at an appropriate time, and gradual extension of compulsory education to subsequent cycles at the Basic Education level;
2. Making Basic Education accessible to all citizens and organization of literacy campaigns as a mass movement;
3. All-round development of the students;
4. Establishment of the vital link between education and production through the inclusion of practical vocational subjects in the Basic Education curricula, which are related to productive undertakings in various regions of the country;
5. Improvement of skills and qualifications of workers who are already on the job and making opportunities for higher education accessible to them.

Technical, agricultural and vocational education. Educational Policies relating to technical, agricultural and vocational education include the following:

1. Training of skilled workers and technicians in line with manpower requirements and plans for socio-economic development;

Education in countries of Asia and Oceania

2. Formulation of programmes to link up teaching with on-the-job experience;
3. Setting priorities for occupations and skills which will be most useful in practical fields;
4. Training middle-level technicians who are at present badly needed for the country's industrialization programmes;
5. Organizing training programmes on vocational subjects for students who have dropped out at various stages of the Basic Education System.

Higher education. Educational Policies relating to higher education include the following:

1. Development of an adequate number of technicians and university graduates who have theoretical knowledge coupled with practical experience;
2. Emphasis on the application aspect in teaching subjects which are required for practical application in productive undertakings;
3. Provision of access to university education to all the population and making university education relevant to a particular job accessible to workers who are engaged in that kind of job;
4. Re-appraisal of the existing system of selection of students for entrance to universities and university-level institutes;
5. Emphasis on subjects which can be taught in the various regions of the country and integration of such subjects to form an interdisciplinary approach.

Educational Policies relating to educational research include the following:

1. Conduct of research relating to modernization of education, identification of problem areas in education and formulation of alternative solutions to educational problems;
2. Finding ways and means for wide application of research findings on education;
3. Dissemination of general knowledge on education;
4. Facilitation of the teaching/learning process including research on curriculum development, textbooks, teaching aids, pedagogy and educational innovation.

The general provisions of Educational Policies include the following:

1. Co-ordination with other departments which are the potential users of the products of the education system;
2. Careful study, experimentation, research and evaluation before introduction of any change into the educational system.



Quantitative review of progress 1971-78

The progress in the number of schools, teachers and students from 1971-72 to 1977-78 is shown in Table 1. It may be noted that during this period the number of primary schools increased by 3,700, of middle schools by 80 and of high schools by 20. These were exclusive of 1,824 affiliated schools (838 primary, 716 middle and 270 high schools) which were opened during the period by the parent-teacher associations with public donations and contributions.

Student enrolment in primary schools increased during the period under review by 20.1 per cent, middle schools by 21.2 per cent, and high schools by 13.8 per cent. Similarly, enrolment in technical high schools and institutes, agricultural high schools and institutes, and other vocational schools and the like increased during the period by 23.8 per cent, while enrolment in universities and colleges increased during the period by 46.6 per cent.

Table 1. Schools, teachers and students (for the Union)

Sr. No.	Particulars	1971/1972				1977/1978 (Provisional)			
		No. of schools	No. of teachers	Enrolled	Final year passed	No. of schools	No. of teachers	Enrolled	Final year passed
1	2	3	4	5	6	7	8	9	10
1.	Primary Schools	18,299	71,136	3,198,670	215,822	21,999	80,343	3,841,667	312,767
2.	Middle Schools	1,182	17,167	650,017	69,843	1,262	20,007	825,195	72,284
3.	High Schools	566	8,294	163,127	17,302	586	10,989	189,146	17,117
4.	Academy for Development of National Group Teachers' Training Institute	1	57	603	134	1	56	670	165
5.	Teachers' Training Schools	11	180	2,428	2,370	12	183	3,806	3,770
6.	Teachers' Training Colleges	3	127	1,841	1,756	3	168	850	825
7.	Technical High Schools	6	276	2,310	644	8	275	2,488	633
8.	Technical Institutes	3	120	1,981	546	5	161	2,927	835
9.	Agricultural High Schools	9	51	863	355	13	74	565	170
10.	Agricultural Institutes	2	50	560	181	2	46	437	105
11.	Special Agricultural Schools	—	—	—	—	2	6	75	75
12.	Other Vocational Schools	4	70	593	362	22	123	1,438	1,138
12.	Engineering Evening Classes	8	119	2,337	1,423	8	120	2,770	1,400
14.	Universities and Colleges:								
	1. Arts and Science Universities	2	959	22,208	4,939	2	1,138	23,053	5,450
	2. Intermediate Colleges	6	993	14,120	2,804	7	645	14,886	4,701
	3. Regional Colleges	—	—	—	—	17	584	11,155	++
	4. Institutes of Medicine	3	481	4,222	414	3	468	3,791	530
	5. Institute of Animal Husbandry and Veterinary Science	1	34	655	47	1	43	594	182
	6. Institute of Economics	1	199	3,989	758	1	212	3,450	1,193
	7. Rangoon Institute of Technology	1	253	3,617	499	1	300	3,250	622
	8. Institute of Agriculture	1	90	999	205	1	93	700	170
	9. Institute of Education	1	144	3,216	633	1	163	1,950	409
	10. Institute of Dental Medicine	1	34	300	47	1	38	320	39
	11. Post Graduate Course for Medicine	—	—	—	—	1	67	143	143
	12. Correspondence Courses	—	—	—	—	1	1,293**	36,500	++
Total		20,111	100,834	4,078,656	321,174	23,960	117,595	4,971,846	424,723

++ Examinations have not been held as yet

** Including part-time teachers

Source: Report to the Pyithu Hluttaw

Enrolment ratios for primary, middle and high-school level age groups and university/college level age groups for the years 1971-72 to 1977-78 are shown in Table 2. It may be noted that the enrolment ratio at the first (primary-school) level increased from 86 per cent in 1971-72 to 90 per cent in 1977-78, and the enrolment ratio at the lower secondary (middle-school) level increased from 20 per cent to 22 per cent, but the enrolment ratio at the upper secondary (high-school) level remained at around six per cent.

Table 2. Enrolment ratios by level of education (in thousands)

Sr. No.	Particulars	1971/72			1977/78		
		Popula- tion	No. of students	Enrol- ment	Popula- tion	No. of students	Enrol- ment
1	2	3	4	5	6	7	8
1	<u>Basic Education</u>						
1	Primary Schools (5-9) Age Group	3,735	3,199	86 %	4,256	3,842	90 %
2	Middle Schools (10-14) Age Group	3,217	650	20 %	3,667	825	22 %
3	High School (15-19) Age Group	2,798	103	6 %	3,188	189	6 %
2	<u>Higher Education</u>						
	(20-24) Age Group*	2,391	64	3 %	2,725	113	4 %

* Includes Technical, Agricultural and Vocational Education

Source: Ministry of Planning and Finance

The pupil/teacher ratio in primary schools increased from 45:1 in 1971-72 to 48:1 in 1977-78; in middle schools it increased from 38:1 to 41:1, while the ratio in high schools decreased slightly from 18:1 to 17:1 in the period under review. In the fields of technical, agricultural and vocational education, the pupil/teacher ratio increased from 12:1 in 1971-72 to 13:1 in 1977-78. In universities and colleges the pupil/teacher ratio increased from 17:1 to 20:1 during the same period.

While the government expenditure on education as a percentage of GDP increased from 2.9 per cent in 1971-72 to 3.2 per cent in 1977-78, expenditure on education (current + capital) increased in absolute terms from K.314 million in 1971-72 to K.486 million in 1977-78.* As a percentage of total government expenditure (current + capital), however, expenditure on education decreased from 16.6 per cent to 12.2 per cent during the same period. This is because the government had to increase spending in other sectors of the national economy at a greater rate than in

* K. = Kyats; 6.72 Kyats = one US dollar

Education in countries of Asia and Oceania

education. For the same reason, government current expenditure on education as a percentage of total government current expenditure decreased from 19.9 per cent in 1971-72 to 14.6 per cent in 1977-78 although, in absolute terms, it increased from K.300 million to K.470 million in this period. Similarly, government capital expenditure on education as a percentage of total government capital expenditure decreased from 3.7 per cent in 1971-72 to 2.1 per cent in 1977-78 although, in absolute terms, it increased from K.14 million to K.16 million.

The distribution of government current expenditure on education among the Departments of Higher Education; Technical, Agricultural and Vocational Education; and Basic Education in the year 1971-72 was 17 per cent, 2 per cent and 80 per cent respectively, while the distribution of government current expenditure on those three Departments in the year 1977-78 was 11 per cent, 2 per cent and 85 per cent respectively. Capital expenditure on education among the Departments of Higher Education; Technical, Agricultural and Vocational Education; and Basic Education in the year 1971-72 was 71, 14 and 15 per cent respectively, while the distribution of government capital expenditure on those three Departments in the year 1977-78 was 57, 17 and 23 per cent respectively.

Recent developments in the field of education

Major developments in the field of education in recent years include:

1. Re-combining Science and Arts streams at the upper secondary (high-school) level of Basic Education;
2. The introduction of University Correspondence Courses; and
3. The opening of 18 Regional Colleges in various States and Divisions.

Recombining Science and Arts streams. As we have seen, the students are divided into Science and Arts streams at the end of the middle-school cycle. While reviewing this practice in the light of the Educational Policies it was found that it was not consistent with the 'all-round development of the students'. The practice was originally introduced with a view to making science-teaching more effective but the results were not realized to the extent anticipated. Significantly it was found to be too early to determine or influence the future occupation of students aged 13 or 14 years. There appeared, moreover, to be inequalities among Science and Arts students in relation to the opportunities for entrance to various institutes of higher learning.

Above all, the objective of 'all-round development of the students' did not receive the emphasis that it deserved. For instance, all students should have some knowledge of history, geography, economics, and literature, as well as of basic sciences. In addition, it is viewed as essential

to equip the students with technical and vocational education as part of Basic Education. Moral Education is also regarded as an essential element in all-round development. For these reasons, the Science and Arts streams at the high-school level have been re-combined with effect from the 1977-78 school year. With this recombination, the necessary arrangements have been made with regard to curriculum revision, textbook preparation and teacher-retraining.

Current enrolment at the first (primary) level is about 3.8 million; at the lower-second (middle-school) level it is more than eight hundred thousand; and at the upper-second (high-school) level it is nearly two hundred thousand. Since vocational education is a relatively more expensive type of education it has to be introduced gradually into Basic Education within the resource constraint. To do this, there is a blueprint for the 'Envisaged System of Education' which is a long-term programme for implementing Educational Policies, and a blueprint for the 'Emerging System of Education', an interim programme.

University correspondence courses. In view of the increasing demand for higher education and the need to make higher education accessible to as many people as possible, University correspondence courses were introduced in 1976-77. The correspondence courses offer, as major fields of study, (1) Science, (2) Arts, (3) Economics and (4) Law.

The courses are of four years' duration and lead to a Bachelor's Degree in one of the four disciplines. In addition to reading materials and written assignments, coaching or tutorial sessions of short duration are arranged for the students before they take their final examinations. Full-time as well as part-time teaching staff employed for the correspondence courses are under the charge of the Rector of the Rangoon Arts and Science University. To assist him there is an administrative staff taking care of day-to-day administrative matters and others who handle the mail section. The General Post Office provides necessary help in handling the mail.

Opening of Regional Colleges. The third major development in the field of education was the opening of 17 Regional Colleges in May-June 1977 and an additional college in January 1978. The Regional Colleges are designed in line with the Educational Policies to: (1) produce middle-grade technicians or skilled workers who are currently in great shortage, (2) train students theoretically and practically so that they will fit into the industries—public-owned, co-operative or private—as soon as they have completed their programme of studies, (3) ensure that students engage in production while learning the various disciplines, (4) educate students in such a way that those of exceptional intellectual calibre and diligence will

Education in countries of Asia and Oceania

be able to pursue higher learning and obtain a university degree. The regional college programme is of two years' duration, followed by one year of on-the-job training either in an appropriate industry or college-operated pilot plant.

For first-year students there will be four subject combinations from which to choose: (1) Science combination with biology, (2) Science combination with mathematics, (3) Arts combination with mathematics, (4) Arts combination without mathematics. For second-year students, 20 technologies or trades are offered. (See Diagram A below)

Diagram A. Technologies offered in Regional Colleges

First Year		Second Year	
Political Science	1-8*	Elements of Business Management	1. Textile Technology
English	12-20		2. Mining and Petroleum Production Technology
Chemistry			3. Metal Processing Technology
Physics	17 Trades		4. Woodworking Technology
Maths. (Sc.)			5. Machinery Repairs and Maintenance Technology
			6. Electrical Repairs and Maintenance Technology
			7. Building Construction and Maintenance Technology
			8. Industrial Arts and Crafts
Political Science	9-14		9. General Agriculture
English	16-20		10. Aquaculture and Aquacultural Product Technology
Chemistry			11. Animal Husbandry and Animal Product Technology
Physics	11 Trades		12. Rubber Technology
Biology			13. Food Technology
			14. Chemical Technology
Political Science			
Burmese	15-20		
English			
Maths. (Arts)	6 Trades		
Logic			
Geography/History			15. Book Keeping and Accounting
Psychology			
Political Science			16. Secretarial Science
Burmese	16-20		17. Mass Communication
English			18. Cinematography
History			19. Printing and Publishing
Geography	5 Trades		20. Home Economics
Logic/ Psychology			

* Numbers indicate the appropriate second-year technologies or trades.

In the early years of operation of any particular regional college, a selected number of technologies or trades are offered, depending upon the availability of equipment, facilities and raw materials in that region. Each student in the second year is required to choose only one technology or trade. All students, however, take 'Elements of Business Management' as a compulsory subject.

After successful completion of two years at the regional colleges a Diploma will be conferred upon the students. Those who wish to pursue further studies will be required to sit for the entrance examinations of the various universities and university-level institutes.

After qualifying at the Regional College, those students who do not wish to pursue further studies, or who do not qualify for entrance to universities or university-level institutes, may undertake on-the-job training in order to acquire adequate practical experience in selected technologies or trades. After satisfactory completion of on-the-job training, a Proficiency Certificate for the particular technology or trade will be awarded to the student.

With this Certificate, the student may then find employment in State-owned enterprises or farm producers' co-operatives, or engage in private undertakings which are allowed to operate within the framework of government economic policy. While students are acquiring practical experience on the job, correspondence courses related to their technology or trade are offered in order to supplement their theoretical knowledge. When the required standard of competency in *theory* as well as *practice* has been achieved, a University degree will also be conferred upon them.

Future plans and programmes for educational development

With regard to future plans, attention is directed to the following:

1. A drive for compulsory primary education and an extended literacy campaign;
2. The continuing insertion of vocational subjects at the Basic Educational level;
3. Continued expansion of Technical, Agricultural and Vocational Education;
4. The review and re-orientation of courses and programmes of universities and university-level institutes;
5. Intensified activities in the field of educational planning and research.

The drive for compulsory primary education and the extended literacy campaign. The stated objective of Educational Policies is to bring basic education within the reach of all. In order to accomplish this objective the plans for future educational development pave the way for the enforcement of compulsory primary education. The Basic Education Department has been expanding the number of primary schools at the rate of 1,100 new schools annually since 1973. Plans for the future provide for

Education in countries of Asia and Oceania

the continued annual increase of the number of primary schools at the same rate. A continued annual increase of about 2,000 primary teachers is planned, together with the provision of training to new recruits or the improvement of those already in service.

A notable recognition of Burma's endeavour in the Literacy Campaign was the award by Unesco of the Mohammed Reza Pahlavi Prize in 1971. The literacy campaign was launched as early as 1965, covering 77 of 316 townships in various parts of the country. Plans for the future include the continuation of the literacy campaign covering an increasing number of townships.

Introduction of vocational subjects. The 'Envisaged System of Education', the long-term programme for implementing Educational Policies, introduces vocational subjects at the Basic Education level. When the objective of 'all-round development of the students' is fully realized, those who have had Basic Education should be able to contribute to production and at the same time be equipped to earn their own livelihood.

The curriculum diversification pilot programme was started in 1974 with a view to introducing vocational subjects in the regular time-table of the lower-secondary (middle school) and upper-secondary (high-school) schools. Under this programme, 50 schools were selected to experiment with new courses in vocational subjects. The experiences gained under this programme are being carefully reviewed. Long-term plans for future educational development postulate the gradual introduction of vocational subjects throughout the Basic Education level.

Continued expansion of technical, agricultural and vocational education. The emphasis of Educational Policies on technical, agricultural and vocational education is obvious. Therefore, continued increase in the number of technical institutes, technical high schools, agricultural high schools and other vocational schools is contemplated in the long-term plans for future educational development. With the establishment of the Regional Colleges, the courses and programmes offered at these institutes and schools will be realigned with those offered at the Regional Colleges.

Review and re-orientation of courses and programmes of universities and university-level institutes. With the opening of the regional colleges, the duration of courses and the programmes of universities and university-level institutes will be correspondingly reduced by two years. While the previous programmes leading to a B.A. or B.Sc. degree were of four years' duration, it is now planned that successful completion of a two-year Diploma course at regional colleges will be followed by courses leading to a B.A.

or B.Sc. degree of two years' duration. Similarly, the previous programmes at the Rangoon Institute of Technology leading to a B.E. degree were of six years' duration. Now, after successful completion of a two-year Diploma course at a regional college, the programmes at the Institute leading to a B.E. degree will be of four years' duration.

Moreover, increasing emphasis in teaching subjects for subsequent use in productive undertakings will be placed on the *application*. The contemplated changes in courses and programmes of universities and university-level institutes and the shift in emphasis to *application* would mean a thorough review and revision of the current curricula and textbooks, re-orientation of teachers with the objectives of the new programmes and the use of more modern methods and techniques of teaching. By holding entrance examinations, the universities and university-level institutes will be able to select appropriate numbers of students commensurate with the capacities and facilities of these institutions. In this way, it is anticipated that the standard of education should be not only maintained but even raised.

Intensified activities in educational planning and research. In order to realize the long-term 'Envisaged System of Education', activities in the field of educational planning and research obviously need to be intensified. In the case of University Correspondence Courses, research projects have been formulated to provide feedback as to the performance of the system. For the Regional Colleges, a continuing system of planning, co-ordination, progress reporting, monitoring and control is being adopted. The re-combination of Arts and Science streams at high schools, and revision of Courses and Programmes at universities and university-level institutes, is being worked out in detail. Finally, with respect to the introduction of vocational subjects at the Basic Education level, a long-term plan of action is being formulated together with resource estimation.

The 'Educational Policies' have been formulated after a long period of deliberation by policy makers, which took into consideration the conditions prevailing in the country. Wherever relevant, however, international experiences in the field of educational development have been drawn upon. The Ministry of Education, with the co-operation and co-ordination of other Ministries and Departments has made important strides in implementing the interim as well as long-term programmes. To realize fully the 'Envisaged System of Education' in accordance with the Educational Policies is a formidable task, and continuing endeavour has to be made in the future.

THE PEOPLE'S REPUBLIC OF CHINA

Introduction

Many countries in this region have made valuable contributions to civilization and the progress of mankind and created their respective brilliant cultures. Only in modern times, the progress of their education and culture have met with obstruction and ravages as a result of the aggression, domination and plunder inflicted by imperialism and colonialism. In this respect, China too was a victim.

China was one of the earliest civilized nations in the world. However, owing to the protracted feudal rule and the invasion by imperialist powers—over the last hundred years or so in particular—Old China was pushed into an abyss of colonialism, semi-colonialism and semi-feudalism, with a declining economy and a backward education and culture. In consequence, only a few could have education while the majority of the population were denied schooling.

Recent achievements

Since the founding of New China, great progress has been made and tremendous changes have taken place in education through the endeavours made in the last 28 years. Before liberation, more than 80 per cent of the population were illiterate. Today, illiteracy has practically been eliminated in most parts of the country.

Primary education in the rural areas and junior secondary education in practically all cities and towns have become almost universal. The full-time school-going population now totals more than 200 million, and includes 140 million pupils in primary schools, 60 million students in secondary schools, and 600,000 students in colleges. In addition, part-time-work and part-time-study schools in urban areas and part-time-study and part-time farming schools in rural areas have been set up. Various forms of spare-time education, through media and methods such as television, radio, correspondence education and evening courses have been organized and promoted.

Before liberation, very few females had access to education. Now, they make up nearly 50 per cent of primary school pupils, 40 per cent of secondary school students, and 30 per cent of college students.

Before liberation also, many minority groups in China had *no written languages*, let alone schools. They recorded events by engraving signs on wood or tying knots in ropes. Now, there are primary and secondary schools for some 50 national minorities, and from these groups a number of students receive higher education.

The entire Tibet Autonomous Region, where there were only two court schools training officials before liberation, has now more than 5,000 primary schools, scores of secondary schools, teacher-training schools and four institutions of higher learning.

All the Chinese people, irrespective of sex or nationality, enjoy equal access to education. The days when the labouring people were deprived of the right to education, as in Old China, are gone forever. This shows that there can be no true national education without national independence. For the development of national education, political and economic independence is a pre-requisite. Without this independence it is impossible to advance national education or to render to everyone an equal right to education.

After liberation, imperialist-controlled schools were taken over to eliminate the influence of the enslaving kind of education and the initiative was taken to develop a national system of education. Later, attention was given to bringing into full play the creativity of the nation so as to work out an educational system and content suited to the reality of the country.

To develop national education, it is also very important to lay stress on the training of one's own cadres and intellectuals. Since the founding of New China, it is ensured that, in compliance with relevant State policy, intellectuals are respected and united. Full play is given to their skills and they are encouraged to make progress through identifying themselves with the workers and peasants. Meanwhile, positive measures have been taken to train new intellectuals in a planned way. The overwhelming majority of the intellectuals have over these years been very active in their work, consciously serving the State and the people, and have been playing an important role in the socialist revolution and socialist construction. A contingent of national intellectuals has thus been built up although the number of intellectuals in the country is far from enough. Graduation—meaning unemployment, as was the case in Old China—has long since become a thing of the past.

The development of national education helps provide people with the various qualifications needed for the country, it consolidates national independence and stimulates the development of the national economy.

Education in countries of Asia and Oceania

However, educational development depends upon the level of economic development. This is felt very strongly in China, which is a developing socialist country with a vast territory, a large population and a rather backward economy.

A review of the path traversed in developing national education for 28 years or more has proved that whenever industrial and agricultural production increased rapidly, education advanced accordingly. Conversely, whenever the economy was in temporary difficulty, the development of education would be adversely affected. In other words, the development of education must be in keeping with the development of the economy. Our principle in this respect is to rely on the nation's own efforts, to work hard, to run schools with frugality and to practise part-time work and part-time study. It is also necessary to rely on the masses and to bring into full play the initiative of all trades and units in running their own schools.

The principle of "walking on two legs" in running schools of diversified types has also been adhered to. In addition to the various types of State-run schools many industrial enterprises and people's communes have also set up their own schools. The Taching Oilfield, for example, has established a fairly complete educational system including pre-school, primary, secondary and college-level institutions as well as spare-time courses for staff members and workers. The well-known Tachai Brigade realized universal primary education in 1958, and is now striving for nine-year compulsory education.

In short, since liberation, the country's educational endeavour has scored great achievements under the guidance of Chairman Mao's revolutionary ideas, and has resulted in important contributions to the advance of the country's socialist revolution and socialist construction.

Current developments

The 11th National Congress of the Communist Party of China and the Fifth National People's Congress have explicitly set the goals for this century and decided to mobilize the people from all walks of life and from every part of the country for a new march towards the modernization of (1) agriculture, (2) industry, (3) national defence and (4) science and technology.

Chairman Hua has called on everyone to raise the scientific and cultural level of the entire Chinese nation, and to train, in the shortest possible time, a substantial contingent of scientists and technical personnel. Only in this way can the people carry out the behest of Chairman Mao

and Premier Chou En-lai to build the country into a powerful modern socialist State with modernization in the above-mentioned four aspects. It is therefore necessary to further implement the fundamental principle laid down by Chairman Mao and to raise the quality of education in schools of all types and at all levels in the shortest time possible, and to expand educational facilities. The target is to enable the millions of labourers to master productive skills, to train hundreds of thousands of capable specialists in various fields, and to produce managerial experts and cadres to serve competently modern economy and modern science and technology.

At present, while due attention is given to the quantitative development of education, more emphasis has to be placed on the improvement of its quality. A beginning has been made first of all with the reform of the enrolment system in colleges. This measure won warm support from the people and brought about a great change in social mood. The Government has restored and re-established a number of key schools and, in non-key schools, key classes and key specialities to help speed up the training of competent personnel, bringing along with it the improvement of quality in education.

In addition to this, attention is given to preparing new textbooks and other instructional materials, enriching their contents with modern scientific knowledge and setting strict demands on students. Efforts are being made to modernize educational media in the schools with special stress laid on audio-visual education. With regard to the combination of education with productive labour, the objective is to adapt education to the needs of modern science and technology so as to bring about constant improvement both in content and in methods. Further, effective measures are taken to raise the quality of teachers, through the development of teacher training at all levels.

Not long ago, under the leadership of the Party Central Committee headed by Chairman Hua Kuo-feng, a national educational work conference was convened. At this conference, Vice-Chairman Teng Hsiao-ping made an important speech and Education Minister Liu Hsi-yao gave a report. In his speech, Vice-Chairman Teng explicitly pointed out that, under the new conditions, effective measures must be taken to implement the fundamental principle laid down by Chairman Mao Tsetung that "education must serve proletarian politics and be combined with productive labour". His speech is the guideline for current action in educational development.

The present situation in China is excellent. The political revolution to expose and criticize the "gang of four" has advanced the development

Education in countries of Asia and Oceania

of production; political stability and unity has brought about economic prosperity. Educational development has become the focus of great attention of the entire Party and the whole country. The entire educational front, with more than nine million educational workers, is now lively and flourishing.

China should not vacillate in developing education independently, with the initiative in its own hands and with its own efforts. This, however, does not mean self-seclusion and the blind rejection of anything foreign. It is the persistent policy of the country to learn from the strong points of every nation and country in the light of China's own reality. The "gang of four" was opposed to learning from the advanced experiences of other countries. And for many years, many of the people knew very little about the situation of education in other parts of the world. China now seeks friendship; it seeks to strengthen solidarity and to enhance co-operation with other countries to learn from their advanced experiences.

There are many ways to carry out international exchange and co-operation in education: to invite foreign experts to China on lecture tours; to send people abroad on visits, study tours or for further training; to exchange students; to promote co-operation in the fields of teaching and scientific research, and to exchange information.

Certain forms of exchange and co-operation have already been evolved with a number of countries. In future, this will be broadened in scope and extended. Such exchanges and co-operation should naturally be conducted on the principle of equality and mutual benefit, and should be closely linked with the reality of the countries concerned. Only in this way can it be conducive to the development of the cause of national education. Malpractices of cultural infiltration under the cloak of "exchange and co-operation" or "assistance" should be resolutely opposed. China is now persisting, and will persist in future in inculcating the spirit of internationalism and friendship with the people of various countries in the field of education on the principle that all countries, big or small, are equal and should show mutual respect and learn from each other without practising big-power chauvinism and hegemonism. International exchange and co-operation conducted in such a spirit will help promote unity and friendship among peoples of all countries and advance human progress.

Conclusion

In developing national education, many problems need to be solved. Although some work has been done in this respect, it is still far from enough. The country is determined to make greater efforts to develop

People's Republic of China

education so as to enhance its service to the realization of the modernization of agriculture, industry, national defence and science and technology.



INDIA

Demographic profile

1971 was the year of the last Indian Human Census. In it a total population of 547 million was recorded. For 1978, the total population of India has been variously estimated at from 634 million to 672 million. During the period 1961-71 the population grew with an average annual growth rate of 2.2 per cent. Because of the family planning measures taken by the Government, the average annual growth rate declined to 2.15 per cent during the period 1971-75. It has been further estimated that it would drop to 1.66 per cent during the period 1986-90. Although the annual growth rate is expected to decline, however, the increase in the population of the country would be substantial—posing a formidable challenge to the Government, which will have to provide educational services for the drastically increasing numbers. Table 1 gives population figures for various age-groups up to the 1978 estimates. (Figures in brackets indicate the percentage of total population).

Table 1. Population for various age groups 1961-78 (millions)

Age Year	Under 15 years	6-11 years	6-23 years	Total
1961	180 (41.0)	67 (15.1)	168 (38.3)	439
1971	230 (42.0)	89 (16.1)	216 (39.4)	547
1978 (estimated)	257 (38.2)	100 (14.9)	260 (38.7)	672

Like most of the developing countries of the region the urban population has also been increasing rapidly. During 1961-71 it increased from 80 million to 109 million, and for 1981 the urban population has been estimated at 148 million.

The literacy scene

The overall position of literacy in the country is disturbing, for although the percentage of literacy has improved, the total number of illiterate persons has continued to increase. A characteristic feature of the

adult literacy scene is that the distribution of illiterates across the geographical regions, as also across the various sections of the population is very uneven. The disparity between urban and rural areas in the target age-group 15-35 years is quite glaring. The percentage of literates in urban areas increased from 60.72 per cent in 1961 to 68.60 per cent in 1971 while in the rural areas it increased from 25.39 per cent to 34.25 per cent, the growth rate for urban and rural areas being 4.4 per cent and 4.5 per cent respectively. The lowest rate of literacy is among the rural females, having been only 11.37 per cent in 1961 and just 18.80 per cent in 1971.

Expansion of education

The period 1960-75 marked an increase in all types of educational institutions. The number of primary schools increased from 330,000 to 454,000 during the period 1960-75, showing an increase of 37 per cent. During 1970-75 the position improved again and the number of institutions increased by 11 per cent. The number of middle and secondary institutions showed an increase of 124 per cent during the period 1960-75. Then, as in most of the developing countries, the higher increase was noticed in the case of institutions for Higher Education. Their number increased by nearly four times during the period 1960-75.

Enrolment

The enrolment increased at all three levels during the period 1960-75. The growth was highest at the third level. The enrolment among girls also showed a similar trend. (Another noteworthy feature is better achievement at all the three levels in the case of girls' education as compared to the boys).

During 1960-75, the enrolment at the first level increased from 34 million to 63 million showing an average annual growth rate of 10.7 per cent as of 1965 and 3.1 per cent during 1970-75. As compared to this the population under the age-group 6-11 years increased at an average annual growth rate of 3.0 per cent during 1961-71 and 1.8 per cent during the period 1971-76, indicating that the enrolment at the first level is increasing at a faster rate than the population.

The enrolment at the second level has increased more rapidly than at the first level. The enrolment went up from 11 million in 1960 to 26 million in 1975 making an average annual growth rate of 9.3 per cent. At the third level, enrolment increased by around 350 per cent during the period 1970-75. It may also be noted that the percentage of female enrolment to total enrolment increased steadily over the period 1960-75. The increase is more pronounced at the second and third levels than at the first.

Education in countries of Asia and Oceania

The distribution of primary enrolment by grades is shown in Table 2 which gives the index figures for enrolment in the first five grades by sex, taking the enrolment in grade I as 100. The enrolment in grades II, III, IV and V declines drastically. The situation is more serious in the case of girls than in that of boys. These figures show the magnitude of wastage and stagnation at various grades in the primary stage.

Considering the trend over the period 1960 to 1975, the percentage of enrolment in grades II to V to the enrolment in grade I has nevertheless shown a definite improvement, especially in the case of girls.

Table 2. Distribution of primary enrolment by grade (grade I= 100)

Classes	1965			1970			1975		
	Male	Female	Median	Male	Female	Median	Male	Female	Median
I	100	100	100	100	100	100	100	100	100
II	59	54	57	61	60	61	68	64	66
III	48	41	45	49	45	48	56	51	54
IV	39	32	36	40	36	39	45	39	43
V	32	23	29	34	28	32	38	32	35

Teachers

The increase in the number of teachers at all three levels of education kept pace with that of the educational institutions and their enrolment.

The number of teachers working in primary schools rose from 742,000 in 1960 to 1,243,000 in 1975. The number of teachers working in secondary schools more than doubled in number during the same period, from 642,000 in 1960 to 1,496,000 in 1975. The highest increase however, occurred in the case of teachers working in third-level institutions as seen by the nearly 300 per cent increase—from 62,000 to 236,000—during the period 1960-75.



Educational financing

Educational expenditure at the three levels increased almost proportionately, as shown in Table 3 below.

Table 3. Expenditure by type of institution

(Rs. in millions)

Level Year	Primary education	Secondary (includes middle) education	Higher education
1960	734	1 118	545
1965	1 287	2 220	1 270
1970	2 346	4 409	2 602
1975	4 463	8 345	4 674

For a variety of reasons, educational financing in India has developed into a multi-source system. The proportion of Government funds to the total educational expenditure has been increasing constantly over the period, from 68 per cent in 1960 to 78.5 per cent in 1975. Over the years, amounts provided in the budgets for education in the respective Departments of State Governments and Central Government have increased greatly: in 1977-78 budgeted expenditure showed an increase of 2.5 times in the case of States and Union Territories and more than three times in the case of the Central budget, over a six-year period.

For all States and Union Territories taken together, the percentage of educational expenditure to the total budget of States and Union Territories was estimated at 24.5 per cent in 1977-78 as compared to 20.3 per cent in 1971-72. The corresponding increase for the Central budget was from 2.5 per cent to 3.15 per cent during the same period.

Developments in educational policy

Based on the recommendations of the Education Commission (1964-66) the Government enunciated a National Policy on Education in 1968. It was accepted that radical reconstruction of education was essential for the economic and cultural development of the country and for realizing the ideals of a socialistic pattern of society. The need was emphasized to make education more suited to the life of the people, to expand educational opportunities, and to give emphasis to science, technology and cultural values, so that the country could occupy its rightful place in the world. It envisaged development on the following lines:

1. Provision of free and compulsory education for all children up to the age of 14 with concurrent efforts to reduce prevailing wastage and stagnation in schools;

Education in countries of Asia and Oceania

2. Recognition of the role of teachers in the field of education, measures to ensure satisfactory service conditions and emoluments strengthening teacher education programmes; recognition of the need for academic freedom;

3. Development of Indian languages and literature; use of the regional languages as media of instruction at primary and secondary stages and also at the universities. The language policy also to support the study of English and other international languages;

4. Equalization of educational opportunities to correct regional imbalances and the provision of facilities for weaker sections of the population and those in rural and backward areas. Special support for the education of girls and backward sections of population, particularly tribal peoples;

5. Integration of science, mathematics and work experience in general education;

6. Development of education for agriculture and industry;

7. Identification and encouragement of talent at all levels;

8. Emphasis on science education and research;

9. Reforms of examination at all levels with a view to helping students to improve their level of achievement rather than certifying the quality of their performance;

10. Provision of more facilities for technical education and vocational education at the secondary stage, conforming broadly to the requirements of the economy and the opportunities for employment;

11. Technical education to be linked to industrial and manpower needs;

12. Regulation of admission to higher education and improvement of standards;

13. Expansion of part-time education and correspondence courses on a large scale;

14. Strengthening of support to programmes for the spread of literacy, and for adult education.

In early 1977 the new government undertook a review of this policy. It is expected that, as a result of this review, a revised Policy would soon be announced ushering in a new era in the country's educational advance.

The government however has not waited for the crystallization of the new Policy but has taken initiatives in those directions which would have the highest priority in its future programmes. These are: restructuring

courses involving the revision of curricula; production of better teaching and learning materials; adoption of improved methods of teaching and evaluation; improving teacher education and gearing the teaching community to effective implementation of programmes; adoption on a large scale of non-formal educational programmes for reducing wastage and universalizing primary education, for regulating pressure on enrolments at the higher stages and for removing adult illiteracy; improving standards and the promotion of research in higher education, including technical education; linking institutions for technical education with industry; and linking higher education, including technical education, with manpower needs. Above all, a proposal of restructuring the system of education is also under consideration.

Services for pre-school children

The Central Government has started a major programme for the provision of education and other services to pre-school children below the age of 6. An integrated Child-Development Services Scheme was introduced in 33 projects in the country on an experimental basis in 1975-76. Of these 33 projects, 29 are in the rural or tribal areas and four in urban slums. Each project aims at developing a package of services to pre-school children, pregnant women and nursing mothers comprising (a) supplementary nutrition, (b) immunization, (c) health check-up, (d) referral



Education in countries of Asia and Oceania

services, (e) nutrition and health education and (f) non-formal pre-school education. The projects are being implemented in co-operation with the State Governments and, in their implementation, voluntary organizations, local bodies, and similar institutions are intimately associated.

Developments in school education

By far the most important educational programme now underway relates to the radical transformation of the content and structure of education so as to make it a powerful instrument of social and economic change. The Education Commission (1964-66) recommended (a) reconstruction of the education system through revision and upgrading of curricula, (b) production of better learning materials, (c) adoption of improved methods of teaching and evaluation and (d) *improvement of the education and training of teachers and their service conditions.*

The first ten years of schooling under the new pattern of education are treated as an integrated unit with the object of providing the general un-differentiated education needed for a changing, complex, and science-based modern society. The next level of two years of higher secondary or intermediate education is proposed as the first stage towards differentiation and specialization with diversified curricula. With substantial vocationalization at this level, two major streams are proposed—the one, a predominantly academic course with several options in the humanities and natural and social sciences; the other, a predominantly vocational course with several options, with supporting and related courses in the humanities and natural and social sciences. There is provision for interchangeability, depending upon the performance and abilities of students. One of the major programmes adopted during the period under review was to initiate a national movement for the formulation of revised and upgraded curricula which would be adopted with some modifications to suit local conditions in all States and Union Territories.

The NCERT has been very effective in the framing of curricula which have been developed with national consensus. The distinctive features are:

1. The curricula are flexible enough to accommodate regional and local needs; they provide enough learning possibilities for the gifted children and compensatory education for the children coming from the weaker sections of society;

2. Work experience is now an integral part of the learning system in all ten years of school education; its aim is to provide a bridge between the learning system and the world of work;

3. Science and mathematics education has become compulsory for all stages of school education;

4. Examination reform has been undertaken to make external and internal evaluation more scientific;

5. The curricula provide for non-formal education and multiple entry into the formal system; and

6. The higher secondary curriculum is designed to sensitize students with respect to a large number of vocational areas, either existing or likely to develop in various parts of the country.

The new curricula for the first ten years of schooling have been introduced in the schools affiliated to the Central Board of Secondary Education including the pace-setting Central Schools run by the Central School Organization for the children of transferable Central Government employees. The Board of Secondary Education also took decisive steps to upgrade the existing 11-year school to 12 years and to implement vocationalization in the last two years. In accordance with the policy of continuous evaluation of curricula, the Union Minister of Education in his capacity as president of the NCERT appointed in 1977 a Review Committee on the curriculum of the ten-year schools. The committee's report has since been received and is under consideration by the government.

Occupational education and science education

Education in India, which has been generally identified with liberal education, is now veering towards occupational education for sizeable



Education in countries of Asia and Oceania

segments of the student population. A centrally sponsored scheme of vocationalization of higher secondary education in the country was begun by the Government of India in 1977. The main objective of the scheme is to encourage the State Governments' efforts to vocationalize higher secondary education and to expand and consolidate it on a regular basis.

A programme for the reorganization and expansion of the teaching of science throughout the school stage has been under implementation since the beginning of the Fourth Plan (1969-70), with assistance from UNICEF. It involves the development of new syllabuses and instructional materials by NCERT in collaboration with Unesco experts. These are made available to the State Governments for adaptation or adoption. It also involves organization by NCERT of in-service training programmes for the teachers of selected schools and the supply of laboratory equipment and a limited amount of paper for printing new instructional materials to key institutions such as State Institutes of Science Education, State Institutes of Education and Teachers' Training Colleges and Schools.

Other schemes

Two other experimental pilot projects covering 15 States and Union Territories, again with UNICEF assistance, have been introduced. One relates to primary education curriculum renewal. Its object is to develop innovative curricula and related instructional materials and techniques which could meet the educational needs of large numbers of children who are likely to remain in school for only a few years—or who do not go to school at all. The curriculum is to be adjusted to the life situation of the child and to the socio-economic opportunities likely to be available.

The second project relates to developmental activities in community education and participation. Its object is to develop and test new types of educational activities as a feasible means of meeting the minimum educational needs of large groups who are currently partially or totally deprived of any form of education. The approach here is based on two premises; namely, that children's education, to be meaningful, has to proceed concurrently with gradual changes and modifications of their socio-economic environment, and that by consolidating educational services for these groups, the reinforcing of the other services can be carried out to the fullest.

Educational technology

An Educational Technology Programme has been in progress since 1972. Its object is to bring about qualitative improvement in education

by stimulating and promoting the integrated use of mass media and instructional technology at all levels. The programme, which is assisted by UNDP, is being implemented through a Centre for Educational Technology set up at NCERT, New Delhi, and through educational technology cells in the States.

SITE programme

During 1975-76 the Educational Technology Programme concerned itself largely with the utilization of the facilities made available under the Satellite Instructional Television Experiment (SITE) for educational purposes. This one-year experiment, which started in August 1975, enabled television to reach remote villages in selected districts of six States. Educational programmes were broadcast to primary school children in 2,400 schools. Teachers were trained in the use of television programmes and were provided with support materials for the daily transmissions.

The Satellite was also used for the in-service training of science teachers. A multi-media package developed by the CET for this purpose comprised a television component in addition to radio broadcasts, experiments in science supported by self-instructional and other printed materials and tutorials by a senior teacher. In the six States, 47,000 primary teachers were trained in October 1975 and July 1976 in training programmes of 12 days' duration each.

Non-formal and part-time education

Any account of developments in the field of school education would be incomplete without a mention of the non-formal education programmes being introduced at the school level. Non-formal education is proposed for older children of more than 9 or 11 years of age who have missed the regular entry point into education or dropped out early. These children are allowed to join part-time classes. Pilot projects are now in progress in many parts of the country. It is hoped that universalization of primary education will be achieved through this significant programme within a short time and at a low cost.

Several Boards of Secondary Education are making their examination open to private candidates. The number of part-time secondary schools is increasing and correspondence courses in secondary education have been introduced.

Developments in adult education

Since 1971 many important developments have taken place in the country in the field of adult education. To begin with, there has been a radical change in its concept. It clearly understood that any programme

Education in countries of Asia and Oceania

which emphasizes mere literacy has no chance of being accepted by the people. The country made a start in making adult literacy more meaningful when it initiated the 'farmers' functional literacy (FFL) programmes in 1967-68 as part of 'experimental world literacy programmes' of Unesco.

Apart from the gradual expansion of this programme, the Government of India has initiated another very comprehensive programme of adult literacy which not simply concerned itself with the vocational functionality of a person (as in the case of FFL) but made human development its focus. This is a non-formal education programme with a focus on the age group 15-25 which recognizes the limitations of the single-point entry, sequential and rigid system of formal education and opens new vistas for expansion of educational facilities and organization of flexible and relevant programmes of education. In addition two other schemes for workers were continued:

- a) Polyvalent Adult Education Centres; and
- b) Workers' Social Education Institutes.

The extension of library services constitutes an important step in the field of non-formal education for youths and adults. Library services in rural and semi-urban areas are being expanded. The Raja Ram Mohan Rai Library Foundation, set up in 1972, has been engaged in supporting the library movement in the countryside and has been supplying books and reading materials to libraries, particularly in non-metropolitan areas. It has so far covered about 6,000 libraries in the rural and semi-urban areas.

Further significant developments have taken place in adult education since early 1977, giving an impetus to the programme. A policy on adult education has been formulated, whose salient features are:

1. A resolution to launch a massive programme of adult education with focus on the 15-35 age group and aimed at making 100 million people literate within five years' time;
2. Acceptance that illiteracy is a serious impediment to an individual's growth and to the country's socio-economic progress, that learning, working and leisure living are inseparable and each acquires a meaning only when correlated with others, and that the illiterate and the poor can rise to their own liberation through literacy, dialogue and action;
3. Special provision for attacking the problem of literacy among the most backward sections of the population; namely, scheduled castes, scheduled tribes and women;
4. Acceptance that adult education is a function of all agencies—governmental and voluntary, in both private and public sectors;
5. Emphasis on the need for adequate preparation and financial provision;



6. Acceptance that approximately 300-350 hours for about nine months is needed for a programme comprising literacy as well as environmental and social education.

Developments in higher education

Important policies have been formulated and programmes implemented for the development of higher education. Introduction of the new Pattern of Education will increase the duration of courses leading to the first degree to 15 years from the present 14 years in many parts of the country. This measure, apart from improving the quality of education, is expected to bring about a greater uniformity in the structure of education, thus increasing the mobility of students and teachers.

A scheme for the restructuring of courses has been introduced to make first-level courses more relevant to the environment and to the developmental needs of the community, and to link education and work/practical/field experience.

A major programme undertaken for encouraging the pursuit of excellence in specific fields, and raising the level and quality of academic achievement at the post-graduate and research stage, is the development of Centres of Advanced Study in the universities. Special financial assistance is provided to 23 university departments to function as centres of

advanced study in specialized fields with internationally comparable standards.

In the colleges, a Science Improvement Programme was initiated in 1970-71 in order to bring about qualitative improvements in the teaching of science to undergraduates. The programme was implemented at two levels; first, at selected colleges for the improvement of science teaching in all science subjects in that college and, second, in selected university departments for the improvement of teaching in all colleges affiliated to the university in the subject. Based on the experience of COSIP, a similar programme for improvement in the humanities and social science instruction in the selected colleges has also been initiated. At present, correspondence courses are being offered by 18 universities and one institution deemed to be a university.

The value of a programme of adult or continuing education and the involvement of universities in these programmes is based on a variety of considerations. The most important is the commitment of the university to the service of the community at large, and to the realization that extension work is as important a function as teaching and research. Such programmes are being implemented by 20 universities.

Support is also being provided for the development of ten centres in the universities for undertaking specialized studies and research in specific areas. The main purpose of the programme is to produce a body of competent scholars who would be continuously engaged in the study, examination and assessment of contemporary developments, especially countries with whom India has historical links.

Developments in technical education

As in the field of higher education, the emphasis in professional education in engineering and technology continued to be on quality improvement, consolidation and strengthening of existing facilities rather than on expansion. The present annual capacity stands at 3,000 for post-graduate courses, 25,000 for first-degree courses, and 50,000 for diploma courses. These are available in 357 Industrial Training Institutes, 320 Polytechnics, 143 engineering colleges and 65 centres for post-graduate courses.

Some of the major reforms and measures in the field of technical education are: the introduction of 'sandwich' courses, particularly at the diploma level; diversified courses at the diploma and degree level; science-oriented, under-graduate courses in Engineering and Technology; and the promotion of post-graduate education by introducing industrially-oriented post-graduate degree and diploma courses. In order to improve the quality of instruction in technical institutions the Government of India

undertook two broad projects, one for faculty development, and the other for curriculum development.

The Faculty Development project consists of long-term and short-term programmes. Teachers in service are provided opportunity to acquire a Masters degree or Ph.D. degree at selected Centres. They are also deputed to undergo industrial/field training at Industrial Centres or to take part in short-term refresher courses or summer/winter schools.

Curriculum development Centres have been set up to develop an optimal course structure for the under-graduate diploma and degree courses in various disciplines.

In tune with national priorities, institutions imparting technical education have engaged in rural developmental work for the past few years. The work includes projects with relevance to rural industries such as:

1. Production of cement from rice husk;
2. Small-scale manufacture of bagasse-based hand-made paper;
3. Design and development of bio-gas plants;
4. Use of agricultural waste to make useful articles;
5. Design and development of solar water heaters.

The provision of equal access to education has been guaranteed by the All India Council for Technical Education by recommending that the sole criteria for admission in Engineering and Technical Institutes should be academic merit. Places are however reserved for certain categories as enjoined by the Constitution.

Attempts have been made to use available resources to the fullest and improve the efficiency and effectiveness of the system. This task is done by the four Technical Teachers' Training Institutes, the five Indian Institutes of Technology and other specialized and well-developed institutes entrusted with this responsibility.

To mobilize resources, on the recommendations of the All India Council of Technical Education, educational institutions have been allowed to undertake consultancy services to cater to the needs of industry and agriculture. Income derived from the consultancy work goes to the further development of the academic activities of the institutions.

Engineering and technical institutions have been encouraged to establish Production-cum-Training Centres to give entrepreneurship training to their students.

Educational research

The National Council of Educational Research and Training (NCERT) has been promoting research in crucial areas of school education. For this purpose, the Council set up an Educational Research and Innovation Committee in 1974. Three task forces set up by the Committee have identified major research problems in broad areas of universalization of elementary education and its social relevance, and improvement in teaching/learning strategies.

The University Grants Commission has made a significant beginning to provide direct support in promoting and strengthening research activities in universities as an integral part of its efforts to upgrade higher education.

Planning and administration

Educational Planning in India is a joint endeavour of the Central and State Governments. A Planning Division in the Central Ministry of Education works in liaison with the Education Division of the Planning Commission of the Government of India. On the basis of the broad guidelines issued by the Planning Commission, tentative plans are prepared by the Central Ministries and the States. Joint consultation on educational planning between the Centre, States and Planning Commission is promoted in All-India forums like the Central Advisory Board of Education and State Education Ministers Conferences. Tentative plan programmes are discussed and examined at various levels before they are finally approved for inclusion in the five-year plans. These plans are flexible and permit modification on the basis of experience, emergence of newer needs or changes in the resource position.

The main goals of educational planning are in the direction of (1) ensuring equality of educational opportunity as part of the overall plan of ensuring social justice, (2) establishing closer links between the pattern of education and the needs of development and the employment market, (3) qualitative improvement, and (4) involvement of the academic community, *including students*, in the tasks of social and economic development. An investment of Rs.12,850 million was earmarked for educational development.

Educational surveys take an important part in the planning of educational facilities. National surveys have been undertaken in the country periodically, and the third in the series of All-India Educational Surveys was undertaken in 1973. This survey was much wider in scope and coverage than the first two surveys which were confined to school education. It covered the educational system from pre-primary to university education and included all categories of educational institutions including

technical and vocational ones. The survey also extended to non-formal educational facilities.

A National Staff College for Educational Planners and Administrators was established in 1970 as a successor institution to the Unesco-sponsored Asian Institute of Educational Planning and Administration. The Staff College organizes pre-service and in-service training courses, conferences, workshops and seminars for all levels of education officers. It also undertakes, aids, promotes and co-ordinates research in various aspects of educational planning and administration.

Steps have also been taken to strengthen the Statistical Division in the Central Ministry of Education and the separate States. The sixth national Conference on Educational Statistics was held in 1975 to discuss the problem of time lag in the collection of educational statistics and to suggest a revised system of collection. Following the recommendations of the Conference, a revised system of collecting annual statistics has been introduced by which statistics of minimum items can be collected quickly and made available in time. Proposals are underway to strengthen the monitoring system at the State and Central levels.

With the termination of the Fifth Plan on 31 March 1978, a new plan has been formulated for the next five years in accordance with new policies and priorities. The total investment envisaged is Rs.19,550 million over the next five years. Out of this, approximately 56 per cent would be on schemes of universalization of education and adult education.

Equalization of educational opportunities

While there has been considerable expansion in all sectors of education in the country, certain imbalances and inequalities have been observed. Equalization of educational opportunities, therefore, has assumed great importance. The Constitution itself directs that the State must provide free and compulsory education up to the age of 14 years. A considerable proportion of the outlay on elementary (primary) education was for fulfilling this directive of the Constitution. Educational facilities were to be provided within walking distance of the children throughout the country. At present, 90 per cent of the rural population is served by primary sections located either in the habitation of residents or within walking distance of one kilometre. Seventy-two per cent of the rural population is served by the middle sections located either in the habitation of residents or within the walking distance of three kilometres. Nearly 89 million children in the age-group 6-14, comprising 69 per cent of the population of that age-group, are now attending schools.

Education in countries of Asia and Oceania

It is now proposed to accelerate the provision of facilities. The States and Union Territories have been requested to draw up detailed plans for this purpose so as to cover the entire population in the next three years. In opening new institutions the general policy adopted is to open them first in bigger villages without schools and then gradually deal with smaller villages in descending order. This policy, though sound, adversely affects the areas which are remote and sparsely populated. It is therefore proposed that these areas be given priority in the opening of new institutions and institutions with hostel facilities.

The provision of universal facilities has been supplemented by other programmes and schemes to facilitate access to educational facilities for all sections of society. These include a package of incentives such as the provision of books and uniforms, free-ships and scholarships and mid-day meals. The curriculum in the school stages has been revised to make it more suited to the needs of the people. Attention has been given to the quality of education and the provision of other facilities in rural areas to arrive at a uniform standard of education. Non-formal programmes have been introduced at the school level to cater to the needs of the weaker sections.

Although Government policy is to restrict admission to higher education, as this is the only source of upward mobility to the weaker sections, preference in admission to higher education has been given first to general learners and those belonging to the weaker sections. There are suitably devised scholarship programmes based on the principle of merit-cum-means to help access to secondary and higher education. Scholarships are provided for talented children in rural areas and scholarships for study in residential schools. Increasing facilities are being made available in various institutions of higher learning for correspondence courses and part-time and own-time instructions.

Linguistic and religious minorities have been given due consideration in the educational policies and provisions of constitutional safeguards. The entire programme is subjected to continuous monitoring to ensure equal access to education for all.

INDONESIA

Universalization of educational access and opportunities for children

Indonesia, like all other developing countries, is confronted with a multitude of problems, one of which is the rapid increase of its population. The consequent increase in school enrolment exerts considerable strain on the formal education system. Strong pressures have therefore been exerted on the Government to increase the number of primary school places. These pressures have been accompanied by a certain eagerness for qualitative improvements as well. It is difficult to provide finance to satisfy both requirements. It would of course be possible to improve the quality of primary education in certain areas but the result might be to restrict enrolment. This is the dilemma.

In order to reach the enrolment target of 85 per cent of the primary-school-age children by the year 1979, the Government has built 201,000 classrooms, rehabilitated 56,000 old classrooms, recruited 290,000 teachers and other staff and distributed very large numbers of books and other materials. Based on the application of the various programmes, especially those of the second five-year development plan, the increases in the numbers of students, teachers and primary schools have been considerable. This is shown in the table below.

Number of pupils, teachers and schools in Indonesia*

Year	Number of pupils	Number of teachers	Number of primary schools	Drop-out rate (per cent)
1974	13 707 866	444 241	66 994	9.6
1975	14 280 157	472 698	73 589	8.5
1976	15 550 124	484 181	74 276	5.9
1977	17 265 291	551 924	83 539	3.8

* Excluding *Madrasah Ibtidaiyah* (religious schools).

The struggle against illiteracy and intensification of adult education

To expand educational opportunities for those who have missed formal education, a number of complementary and alternative programmes of non-formal education have been devised and implemented. Of these a notable programme is one offering basic education to non-school youngsters, youth and adults. This Work/Study Programme, known as the

Education in countries of Asia and Oceania

Program Kajar, has been designed to give the out-of-school population a chance to attain the basic knowledge, attitudes and skills relevant to development while they are going about their daily chores. The programme is made up of three components: (1) the development and production of a learning package—a series of about 100 booklets and their supplementary materials containing the seven elements of basic learning needs as determined by the Government; (2) the motivation for and organization of learning in the community; (3) the motivation and training of community leaders and volunteers to serve in the programme. Although the learning group will be the main delivery mechanism for this programme of basic education, other forms of learning activities are also used, such as self-learning and apprenticeship.

Active programmes of literacy and other adult education programmes have also been intensified. In the regions where the Work/Study Programme has not yet been implemented, traditional programmes for the teaching of reading and writing are continually being improved. Past experience with literacy programmes shows recurrent failure in sustaining the skill of the new literates. There are two main causes for this failure. One has been the low quality of literacy teaching. Most courses offering literacy teaching in three months have given the learners only a skill of letter recognition. The second cause of failure was that learners have no opportunity of nurturing the newly acquired skill due to the lack of follow-up reading materials.

With the introduction of the Work/Study Programme, with its learning package of some 100 booklets, it is foreseen that the literacy programme will henceforth give viable skills to the participants.

Another notable adult education programme is the family life course. This course teaches "Ten aspects of a well-cared-for family". These include basic health, nutrition, child care, household management and domestic skills such as sewing, cooking and weaving. The programme has proved very popular with women, a high percentage of whom are educationally deprived.

Non-formal programmes of education and training for out-of-school youth

Much emphasis has been placed on non-formal programmes involving technical and vocational skill training to prepare out-of-school youth for a more productive life. It is estimated that 30 per cent of the 11 million young people in Indonesia enter the labour market every year. Of this work force, the highest percentages are those with a very poor educational background. Since most of the work force lives in the rural areas where employment opportunity is restricted to small-scale farming with little yield and erratic earnings, there has been a surge of migration to the towns.



of-school population in the villages, aims at teaching or improving vocational skills, leading to self-employment in the villages, thus curbing urbanization.

Non-formal skill training courses are provided in such areas as business, trade, linguistics, auto-mechanics and electronics. More than 4,000 courses are now in progress with a total enrolment of 800,000 students.

Development of comprehensive, diversified and flexible structures in order to broaden access to education

Efforts to broaden access to education are implemented through school and out-of-school activities. These include the enlargement of the schools' capacity to enrol students, the development of alternative delivery systems and the development of alternative learning materials. Activities are also promoted in the various social groupings including youth organizations and cultural circles.

An example of the use of an alternative mode of delivery is that of the PAMONG system. This is designed for disadvantaged groups except those needing special schools. The system provides most of the primary school curriculum in the form of self-instructional learning materials which the pupils can learn at times and places suited to them and not necessarily in school. Many of those enrolled in this system learn in their

Education in countries of Asia and Oceania

own homes or at the learning posts which have been provided by the community for them in their villages.

Besides providing learning posts, which form satellites to the village school, both the community members and the parents help in motivating disadvantaged children to learn. Older and more clever children are also encouraged to help to overcome problems encountered by their younger brothers, younger sisters or friends who may be studying the self-instructional learning materials. Skilled people in the community such as artisans and craftsmen are encouraged to help with some of the teaching. The teachers themselves play the role of managers of the whole learning process and provide the extra assistance needed by the learners.

Preparation is also being made for the development of Open Secondary Education. The basic objective is to provide alternative channels for the delivery of the formal secondary curriculum to those who need to study but are unable to enrol in the ordinary formal secondary school. This alternative channel will deliver the curriculum through modules of self-instructional learning materials, radio and other means.

A strengthening of vocational secondary education is also being planned to meet the needs for middle-level technicians. Polytechnic education institutions at the third level are also being established as part of the effort to make the educational system more comprehensive and diversified.

Educational administration, management and facilities development

During recent years, Indonesia has embarked on a programme directed towards the improvement of educational management and administration. The steps taken in this direction include:

1. Congruent restructuring of the organization of the Ministry of Education and Culture;
2. Retraining of administrative personnel both at the centres and in the regions. During the last five years more than 5,000 administrative personnel have received training;
3. Improving job descriptions to ensure better harmony between administrative units and a more effective decision-making process;
4. The use of computers, particularly for personnel administration, financial administration and administration of the material inventory;
5. Improvement of facilities such as office buildings, office equipment and means of communication, both at the centre and in the regions.

Community contributions to education

Public primary schools are financed by the Government but there is still a lack of facilities. To help overcome this, contributions are collected voluntarily to pay for the additional facilities needed. There are, in addition to the public primary schools, three categories of private primary schools. The arrangements for financing these private schools are:

1. Subsidies for teachers who are appointed and financed by the Government; facilities are also given by the Government, while the rest of the school budget is provided by the community;

2. A second category of private primary schools is provided with teachers by the Government and the rest of the costs are covered by the community;

3. Finally, there are the totally private schools where the entire budget is provided either by the community or by an educational foundation. In order to achieve universal education at the primary level, the Government is providing educational support to the private schools through the rehabilitation of buildings, distribution of textbooks, training of teachers and the provision of subsidies for teachers and facilities.

In addition to the community contribution to primary education, there is also a substantial input to pre-school education where most of the kindergartens are privately managed. Public contributions likewise finance the majority of schools for handicapped children, the majority of lower-secondary schools and many higher-secondary schools. It is the policy of the Government to increase the numbers of all these institutions and to improve their quality.

Along with the financial inputs made by the community to the education system, there are other forms of community participation. These include three categories of volunteers working for development of the villages. Most of these volunteers are young people who live in the urban centres but are willing to go and live with the rural people for a while, acting as partners in development. They are thus pioneers for development and modernization—or simply agents for change.

Primary teacher educational training

The training of primary school teachers is arranged through a three-tiered programme in which supervisors from the centre train national tutors who, in turn, train local mobile in-service training teams. The mobile in-service teams, in turn, provide in-service training for primary school teachers. Supplementary assistance to this scheme is provided by regionally operated radio programmes. The project is large in scale and of

Education in countries of Asia and Oceania

wide application, for many of the primary schools are spread over the more remote areas of the islands. The number of teachers and supervisors that profit by in-service programmes now amounts to well over one million. The progress of the in-service training programmes in all 27 provinces in Indonesia is also intensively monitored.

Inter-linking of education and productive work

Before 1969 nearly 700 junior and senior technical schools had been established. The objectives of education in these schools were not, however, clearly defined. Many teachers, parents and students saw the schools as a stepping stone to higher education rather than as a preparation for employment demanding technical skill. At that time, there were too many schools, unnecessary duplication and an excess of courses, all providing graduates who were unable to find employment suited to their educational background. The approach was mainly theoretical and lacked the skill content desired by employers. Similar problems had been faced in vocational education where the graduates of business schools and home economics schools were unable to find employment.

The strategy of the second Five-Year Development Plan (1974-1979) in respect of the development of technical and vocational education set out to change the previous situation. The proposal included:

1. An expansion of work opportunities;
2. Industrial development, especially in support of agricultural production and in preparation for the industrial growth that was foreseen;
3. Raising the status of the educational sectors of the community and
4. Establishment of a better balance between regional and national development.

Programmes resulting from this strategy are extensive. Using substantial credits from the World Bank group, a large number of technical training centres are being constructed as well as training institutions for teachers of technical subjects. Many of the existing technical and vocational schools are being improved in respect of the quality of their offerings and expanded to produce substantially larger numbers of graduates than previously. This physical development is being matched by the development of new curricula which place special emphasis on technical skills and the use of up-to-date materials and methods. New textbooks are being prepared or existing ones improved, and equipment is to be standardized.



Integrated rural development

Non-formal education programmes, especially in the rural communities, have been closely linked with rural development. Since 1971, a comprehensive programme of basic social services to children, youth and mothers has been introduced and vigorously implemented as part of the efforts made towards community development. When this programme was initiated, and for the first few years of its operation, it was organized by the Departments of the Interior, Education and Social Affairs. As the project progressed and began to show good results, four more departments were involved.

The programme has been designed to ensure co-ordinated and integrated delivery of social services from all participating departments to the general public, and particularly to those who are less privileged and live in rural areas. The principal contribution of non-formal education programmes has been to raise the general level of education of the community, enabling people to be more responsive to specific developmental programmes. Courses in literacy, for example, featuring practical skills in poultry-raising and tied-in with nutrition improvement programmes, have been mutually supportive. Such courses, moreover, have led to high productivity on the part of those who participated in them.

The planning of education

The national education policy of Indonesia is directed towards ensuring equality of access to education for all, to improving the quality of educational offerings, to strengthening the relevance of education and to improving the efficiency and effectiveness of the educational management system. The policy has developed from a framework based on '*Pancasila*' (five pillars of the nation) and which includes in terms of the individual, three objectives:

1. The continuous development in the individual of a capability to respond to the ecological challenges that are faced;
2. To develop the capability of reasoning which may then strengthen religious belief and general behaviour;
3. To develop the professional capability of the individual to perform national development duties.

In order to elaborate the national educational policy into plans and programmes, improvements in the planning of education have to be continuously sought. One such improvement has been achieved through the establishment of planning units at both the centre and the provincial levels. In addition, the capabilities of the planners have been enhanced through a systematic improvement programme which consists of three consecutive training courses in basic, intermediate and advanced educational planning.

Higher education

There are 40 public and more than 300 private institutions of university status. They have a combined enrolment of approximately 250,000. All of these institutions, both public and private, are under the direction and management of the Directorate General of Higher Education, of the Ministry of Education and Culture.

State policy directives of 1978 have given guidelines for the future development of higher education, which is to be geared towards:

1. Making higher education institutions the centres for research and development in science and technology;
2. Educating students to have a spirit of service as well as a feeling of responsibility toward the nation;
3. Activating students so that they are able to help national as well as regional development efforts;
4. Developing a form of campus life which clearly reflects the characteristics of Indonesian society.

The State policy directives are intended to correct the defects in higher education which were first identified in a Government 'Basic memorandum' published in 1968. The memorandum stated, among other things, that higher education institutions were failing to fulfil their function as centres for culture and science, that the standards for higher education were low and that the organization of higher education was politically oriented. In addition, the memorandum said that the physical facilities were poor, there was limited budgetary provision for higher education and the teaching staffs were limited in ability and number.

To overcome the problems the Government undertook the reorganization of higher education institutions, initiated curriculum development, took steps to improve the quality of staff and made provision for bigger budgets thus ensuring that material development took place. These improvements have been vigorously followed up by a number of other measures for the development of higher education. These measures are structured upon two ideas: first, improving the system of higher education as a whole and, second, developing higher education on a long-term basis in order to make a solid contribution to controlled development.

Research and development in education

Basically the Ministry of Education and Culture has three main tasks:

1. Research, development and planning (long- medium- and short-term);
2. Implementation and control;
3. Logistical support.

These tasks are carried out by seven sections of the Ministry. The research, development and planning activity is the responsibility of one of these sections, the Office of Educational and Cultural Research and Development, or 'BP3K' as it is known in the Indonesian language. This office, established in 1969, is required especially to:

- a) Co-ordinate and conduct research in the education sector;
- b) Carry out experiments and pilot projects in connexion with educational development;
- c) Prepare policies, plans and programmes on behalf of the Minister of Education and Culture.

Since the office was established it has contributed significantly to the solution of many educational problems and difficulties in Indonesia. Many of its research and development findings have provided the basis for policies adopted and incorporated in the First and Second Five-Year Development Plans.

Education in countries of Asia and Oceania

Among the current research and development activities are the PAMONG project, which has been described; the development school pilot project for the use of modules in instruction; the primary and secondary student assessment study; and regional, integrated educational planning projects.

Most of the educational endeavours in Indonesia, especially those concerned with research and development, require a sound data base. BP3K is responsible for data processing and statistics at the central level and for the co-ordination of this work in the regions of the country.

Population education and environment education

Two recent introductions in the curriculum of Indonesian primary and secondary schools have resulted from the increases in population that have taken place in Indonesia in recent years. In 1961 the population of the country was about 97 million. In 1978 it was about 137 million. With the present high rate of annual growth of 2.3 per cent the population of Indonesia would be doubled in the next 29 years.

The introduction of population education as a new component in the education system started in 1970 after a seminar on population education held by Unesco in Bangkok. By 1975 population education had been integrated in all relevant fields of study in the curriculum. The new theme is in the process of development as an independent curriculum component.

The programme still needs skilled and experienced personnel at all levels, specialists in curriculum development, a teacher-educator programme, research and evaluation, and writers and artists to develop instructional and audio-visual materials. The need for trained personnel might be solved through:

- a) Setting up and strengthening mobile teams capable of conducting various types of intensive courses (from 2-6 weeks);
- b) Working with higher education centres (at the university or teacher training institutes) to establish courses specifically dealing with population education and its programme development.

It has been observed in Indonesia, as in all other parts of the world, that natural resources are being utilized carelessly. This is damaging the environment and causing disequilibrium. It is common to see floods in big cities after good buildings are constructed, while in some parts of the country, floods and erosion are clearly caused by forest cutting. In the sea, fish and other marine creatures are dying because of pollution of sea

water. It is stipulated in the 'Broad Outlines of the State's Policy' therefore that, in implementing development, Indonesian national resources should be utilized rationally.

Since participating in the Belgrade International Workshop on the environment in 1975, Indonesia has tried to introduce environment education. It is aimed at making people realize the relationship between what they do and changes in the environment. It is focused on how to solve and prevent environment problems effectively. The process is not confined to formal education but covers non-formal education using media such as radio, television, newspapers, professional journals and advertisements.

Environmental education has the characteristic of being interdisciplinary, its content coming into such areas as the humanities, the natural sciences, the social sciences, economics, psychology and engineering. The objectives are:

- a) To develop understanding and sensitivity towards the environment and its problems;
- b) To develop the knowledge, skills, motivation and responsibility needed to solve environmental problems now and in the future.



IRAN

Background

The growth in the number of students in Iran has been dramatic. A significant aspect of this increase is its effect in reducing inequalities between urban and rural communities. The attainment of this goal is an important development objective. The table on page 85 provides a statistical portrayal of the changes at all levels of Iran's public school system and the different growth rates in the various social and age groups. The aim has been to achieve universal access to primary education and to reduce inequalities of opportunity such as those between the urban and rural areas.

A large part of the educational expansion policy has been to complement the removal of 'physical obstacles'—such as lack of roads and other communications—standing in the way of development in rural areas.

Pre-elementary education

The number of kindergarten pupils has increased 12-fold in the past seven years. This increase has been most remarkable in rural areas, being 73-fold in some regions. In 1971, only three per cent of the nation's total kindergarten attendance were in villages. Currently, 19 per cent of kindergarten pupils are in villages and rural areas. Kindergartens have grown from 349 to 2,918 in number, registering an eight-fold increase.

Primary school education

The emphasis in primary education has been placed on the absorption of rural students. The objective has been almost entirely realized. The number of students in urban centres grew by 27 per cent during the seven-year period. The comparable figure for rural areas is 70 per cent.

Educational development in Iran during this period has aimed at the achievement of two goals, namely the reduction of inequalities and the provision of universal access to primary education. The first objective has been largely accomplished and good progress has been made in respect of the second.

IRAN. Changes in the enrolment in the Public Education System during the Period from the Singapore Conference (1971) to the Colombo Conference (1978)

IRAN. Changes in the enrolment in the Public Education System during the Period from the Singapore Conference (1971) to the Colombo Conference (1975)																
Year, Sex and Study Level, Rural and Urban Areas	Kindergarten			Primary School			Guidance Course			Public Secondary School			Technical/Vocational Institutes	Teacher Training	Total*	
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total				
1970-71	Urban	10 204	8 405	18 699	1 001 620	830 096	1 831 716	-	-	-	572 655	316 724	899 379			
	Rural	308	301	609	1 207 310	376 624	1 583 934	-	-	-	105 508	18 033	123 541			
	Total	10 520	8 706	19 306	2 208 930	1 206 720	3 415 650	-	-	-	678 163	334 757	1 012 920	30 579	13 288	4 491 815
1973-74**	Urban	20 446	17 126	37 572	1 014 325	841 331	1 855 651	442 681	295 732	738 413	431 764	247 648	679 412			
	Rural	1 954	1 461	3 415	1 333 979	456 786	1 790 765	133 364	34 561	167 925	58 215	9 615	67 830			
	Total	22 400	18 587	40 987	2 348 304	1 298 117	3 646 481	576 045	330 293	906 338	48 979	757 263	747 242	88 054	34 298	6 153 765
1977-78	Urban	101 929	88 781	190 710	1 253 432	1 067 711	2 321 143	665 896	455 014	1 120 910	410 505	301 687	712 392			
	Rural	24 909	19 517	44 426	1 814 782	884 761	2 699 543	251 675	73 755	325 430	33 961	10 170	44 131			
	Total	126 838	108 298	235 136	3 068 214	1 952 472	5 020 686	917 571	528 769	1 446 340	444 466	312 057	756 523	251 128	54 435	8 914 842
Seven-year growth of all levels (except guidance)	Urban	10-Fold	10-Fold	10-Fold	25%	24%	27%	50%	54%	52%	28%	5%	20%			
	Rural	81-Fold	65-Fold	73-Fold	50.3%	135%	70%	88%	134%	94%	68%	44%	64%			
Four-year growth of Guidance Course	Total	12-Fold	12-Fold	12-Fold	39%	62%	47%	59.3%	60%	59.6%	35%	7%	25%	8.2%	4.1-Fold	2-Fold

* Total number of students does not equal the total of corresponding figures in the horizontal column because the columns do not reflect literacy courses, night courses and others.

** The year 1973-1974 was taken as a benchmark for Guidance Phase Statistics because from this year all three Guidance Grades were filled.

Iran

Education in countries of Asia and Oceania

Notable advances have been made in equalizing educational opportunities in rural and urban areas, but difficult terrain and other natural obstacles have caused the expansion effort to fall somewhat short.

There is, however, room for optimism in view of the advances made in tribal-education methods. Because of these new approaches, inequalities are expected to be whittled down substantially.

At any rate, the trend so far registered is itself heartening. The liability of children to compulsory education has increased from 70 per cent in 1971 to 80 per cent in 1978. Currently, 68 per cent of such children in rural areas and 93 per cent of them in urban centres are going to school. In towns and cities, about 100 per cent of boys liable to compulsory education go to school. Those for whom accommodation could not be found were girls, and especially girls in rural areas.

It must be noted that in view of the almost total participation of primary school-age children in urban areas, the rate of growth of enrolments has levelled off and will in the future decline. In contrast, the same trend continues sharply upwards in rural areas.

Expansion of educational opportunities for rural children will continue to receive priority treatment throughout the 1980s. In 1971, rural primary students comprised 46 per cent of the national total. Now they make up about 54 per cent of all primary students in Iran.

The 'Guidance' course

A development in the national system of education was the introduction of the Guidance course in the academic year 1971-72. The Guidance course is a three-year period of intermediate schooling and is so-named because it is during this period that the direction of students' future studies is determined. It represents the second phase of public education in Iran.

The choice of where one might prefer to continue one's studies is shaped by a variety of social, cultural, economic, moral and traditional values. The significance of the Guidance course lies in the fact that it gave the schooling system an instrument for assessing the aptitude and abilities of the students and guiding them into the field in which they can perform best.

An additional advantage of the introduction of this phase has been the inclusion of a 'professional and technology' course in the secondary school curriculum. This course acquaints students with the jobs available in the country and gives them an opportunity to test their aptitudes in technical fields. The former schooling system did not provide this opportunity.

The third advantage is that the Guidance course helps students in the acquisition of marketable skills so that, if they do not wish to continue academic studies further, they should be qualified to begin working. In fact, 20 per cent of the students leave school at the end of this three-year phase.

Finally, the fourth advantage of this new phase has been the opportunity to revise textbooks which are now vastly improved in terms of content and presentation.

It must be noted that the Guidance stage of education in Iran is new and in need of more time in which to develop fully. Among the problems that still have to be solved are the training of adequate numbers of teachers and counsellors, the evolution of an effective system of assessing aptitudes and educational progress, the production of books and preparation of courses and laboratory methods suited to the broad objectives of general education in the country.

Quantitative changes in the Guidance course

Guidance course students numbered 259,218 in the first year of introduction, 1971-1972. In 1973-74, all three grades of that stage were operating and 906,338 students were enrolled. In the past three years, the number of students has further increased, reaching the 1.5 million mark. This sudden increase in numbers was due mainly to the edict on free education which caused a dramatic rise in the demand for admission at all levels. Obviously, the sudden growth in student population led to some shortages because resources became more thinly spread. A major effort is being made to remove the difficulties resulting from this sudden rise in demand.

In 1971-72, 17.1 per cent of the rural children eligible for Guidance education were enrolled. The figure is now 22.5 per cent. The comparable enrolment percentage at urban centres is now 77.5 per cent. One of the basic aims of the current educational development programme is the effective reduction of this disparity. The aim is to increase rural enrolment to 35 per cent during the Sixth Development Plan, scheduled to end in 1983.

Secondary education

Public secondary education starts after compulsory education and lays the groundwork for more advanced studies. It is in this phase that the career, social status and academic direction of young adults are strongly influenced. In recent years, before the introduction of the new public

Education in countries of Asia and Oceania

school system, secondary education had registered dramatic growth in Iran, far exceeding the average growth rate of similar Asian countries.

There are continuing, even growing inequalities in access to secondary education as between village and urban communities. Since the first year of implementation of the new system of secondary education, access of rural youth to education at this level has improved at a snail's pace... from 5.7 to 5.8 per cent. Several factors appear to account for this.

First, until 1974-75, secondary education included six grades. Thereafter, it was reduced gradually to four grades, with the first three being devoted to Guidance Studies, which are no longer covered under the term 'Secondary education'.

Second, it was decided not to give priority treatment to theoretical studies at the second level in rural areas until universal access to compulsory public education is achieved. This policy has been formulated in response to the dictates of the socio-economic conditions of the country.

Third, rural inhabitants now enjoy increasing incomes. They have therefore tended to send their children to urban centres for further studies after the completion of primary education. Hence, these rural children appear in the statistics as urban school attenders.

In view of the urgent need for skilled and semi-skilled manpower in Iran, special priority was given in 1977 to the training of vocational teachers, the shortage of which was the main obstacle in the way of the expansion of vocational education. Secondary vocational education training is divided into two broad categories:

1. Technical: including training in industrial and agricultural skills;
2. Services: including business skills and office management.

In addition to the vocational training provided by the Education Ministry's programmes, there are more than 50 other organizations providing vocational training services. The courses include short-term and degree courses offered by the various colleges and universities. The Ministry of Education's four-year vocational training courses have recently expanded 30 per cent annually and are currently training 250,000 students. Moreover, the teacher-training colleges currently have 2,800 students of vocational education, 15,000 students of technology, 3,000 students of school health care, and 500 students of art education.

After introduction of the new system in 1974, secondary education was reduced from six to four years. It is still too soon to attempt a comprehensive analysis of its achievements and failures, but it can be said that the fall in the number of students at the secondary level was caused by two factors: (1) the curtailment of the duration of secondary education

by two years; and (2) the increasing popularity of vocational and technical training among secondary school students. Programmes implemented to reduce inequality of access have also affected secondary education.

Adult education

Special courses have been provided for those who have, for various reasons, dropped out of the national schooling system. These courses are attended by adults of whom 85 per cent are between 15 and 30 years of age.

Some courses, which are similar to the Guidance Course described above, provide an opportunity to continue studies to those who have, for various reasons, failed to attend day-time schools. Such students gain a very general acquaintance with science, theoretical studies and professional skills.

For those who, because of their occupation, geographical location, or other difficulties are incapable of attending regular class sessions, an opportunity for education is provided through correspondence. 'Study



Education in countries of Asia and Oceania

Guides' are mailed to such students regularly. Three sets of tests for each lesson covered are also supplied. Each provincial department of education has been empowered to run correspondence courses for its own area independently.

Senior secondary school education is offered to students who have passed earlier courses either through correspondence or through attendance in lower-level courses.

Young men and women who have completed literacy training and wish to pursue their studies are offered adult literacy courses. In this way they can work their way to a certificate of primary education.

Students can learn to read, write and perform arithmetical calculations while simultaneously learning marketable skills through a scheme of vocational literacy training. This training includes making clothes, weaving, agriculture, automobile repair, metal-working and similar vocations. These courses are offered in two six-month phases and at present are available in seven provinces.

Private institutes also offer courses for the acquisition of a broad range of marketable skills including accounting, double-entry book-keeping, filing, draftsmanship, interior decoration, cloth-printing, electrical repairs, radio and TV repairs, computer programming, automobile repairs, foreign languages and cooking. In 1977, more than 60,000 students were attending such courses in 482 institutes throughout Iran.

Higher education

Higher education in Iran has had a dramatic growth, especially during the last five years. The national student population at the third level grew from 74,700 to 170,000 in this period, reflecting a growth rate of 127 per cent. Similarly, the number of colleges and universities increased almost threefold from 83 to 236 in the same period. Of these institutions, 21 are universities and the rest are colleges and schools of advanced studies at junior-college, Bachelor-degree and master-degree levels. Fifty-five per cent of students in higher education institutions are studying technical and scientific subjects suited to Iran's socio-economic development. Thus, the policy of promoting education in the skills needed by the nation's rapidly developing economy has been largely successful.

Innovations in rural development and tribal education

In 1963, there were 7,930 schools in rural areas which accommodated more than 604,000 students. Since then some 128,830 secondary school graduates have been trained and sent to teach in rural areas. Because of this 15-year effort, there are now 33,520 schools in rural areas,

accommodating almost 2,700,000 primary school students. New construction in the rural areas includes the building of 9,160 bath-houses, 5,800 mosques, 61,520 bridges, 214,360 kilometres of roads and 190,670 hygienic wells. During this period, more than five million trees have been planted. Progress has been made in counselling in family-planning and the provision of training in a broad range of domestic science skills including cooking, sewing and child care.

Iran has a nomadic population of about four million. The nomadic tribes spend the spring and the autumn in migrating from one spot to another. They were completely deprived of education until 24 years ago. At the start of the programme for tribal education, the Government had no alternative but to rely on untrained rural teachers because urban teachers were completely unprepared for dealing with nomadic students.

The next step was the establishment of a teacher-training school which gradually attracted tribes, kept moving with them and set up tent-schools for the education of the young. There is now a tribal Teacher-Training College that turns out about 60 graduates each year. Tribal education in Iran has been a highly innovative educational programme. Its success lies in its emphasis on the preservation of tribal traditions, customs and ways of life. It does not, in any manner, try to introduce urban ways



Education in countries of Asia and Oceania

into tribal cultures but helps develop basic skills in reading, writing, and arithmetic, complemented with knowledge of health care, agriculture and stock-breeding.

A tribal high school with boarding facilities has been established and now accommodates 1,163 students. The school teachers are from the tribal background and have gained bachelor's degrees after serving as teachers in tribal primary schools. This high school provides additional training in tribal handicrafts including mat-weaving, fabric-printing (using natural dyes), carpet-weaving and cloth-making. Training in modern skills including electricity, pipe-laying, carpentry, car repairs, metal working and masonry is also provided.

A total of 130 women have graduated from the Tribal Midwife-Training College. They can now provide a broad range of services to tribal women including delivering babies, promoting family planning, supplying health care and counselling on child care.

The organization's research activities cover quantitative and qualitative problems, evaluation methods, textbooks, and new educational techniques. The organization tests its new ideas and methods in experimental schools before recommending them for universal application.

Iranian educational objectives

Objectives for the 1980s include the following:

1. The expansion of pre-school education, including the training of teachers;
2. The achievement of universal primary education; reduction of inequalities of access to education in rural and urban areas and continued expansion of free education;
3. Development of the Guidance phase of education, especially the supply of adequate numbers of educational counsellors to provide career orientation and assistance in the choice of fields for further studies in keeping with the manpower needs of the country;
4. The balanced development of theoretical and technical studies at the second level in order that high school graduates will be able to put their acquired skills to profitable use;
5. The expansion of higher education in line with the labour needs of the nation, special attention to be given to the development of teacher-training institutions and to engineering, medical, scientific, law, fine arts and junior college courses;
6. Emphasis on unofficial (extra-mural) education in the fields of literacy, functional literacy training, and complementary studies;

7. The qualitative and quantitative development of teacher-training institutes;

8. The use of the training facilities of private and public organizations to boost the nation's vocational training capacity in order to provide, by the end of the next decade, all the skilled labour needed by the country;

9. The use of educational technology to boost quality and quantity with emphasis on training aids to speed up the students' absorption of skills and knowledge;

10. Priority attention to the cultural values and national identity in order to temper economic development with humanitarian and moral progress. Iran intends to build on the fundamental elements of its cultural heritage in order to give its future progress the desired direction and to bring about a balanced combination of material, cultural and spiritual progress;

11. Revision of the organization and methods of education to make them more responsive to the development needs of society, particularly at the local level;

12. Constant evaluation of educational programmes and continuing reforms in content, organization and objectives combined with the use of modern educational technology.



JAPAN

Education in Japan: the background

In a broad sense, education in Japan has been widely popularized and has reached a high standard. Steady steps have been taken toward the attainment of one of the main objectives of education—that of contributing to world peace and human welfare through the development of a democratic and peaceful society. This aim conforms with the spirit of the Constitution of the State.

The Fundamental Law of Education of Japan requires that all people be provided with equal opportunities for education according to their ability and without discrimination. Education in Japan has, as a result, greatly expanded in recent years. Compulsory education at the elementary (primary) and lower-secondary levels has resulted in an enrolment ratio which exceeds 99.9 per cent in both urban and rural areas. Some 93 per cent of lower-secondary school students now carry on to education at the upper-secondary stage. There is little discrepancy between the numbers of male and female students attending upper-secondary education.

As for higher education, students attending universities and junior colleges have more than doubled in number during the past decade and now include 38 per cent of the population of university age. (For enrolment and other data for all levels, see tables on page 95).

In all, some 23 per cent of the total population of Japan are now enrolled in institutions of the education system. The concept of lifelong education is rapidly spreading among the people and as a reflection of this, social education has become increasingly popular in recent years.

The rapid expansion of education has not, however, been without problems. These include the need for further qualitative improvement; the need to extend guidance and counselling to the older students and the need to find ways of redressing the regional imbalances in higher education.

Reform in primary and secondary education

In December 1976 the Curriculum Council identified three basic aims for the improvement of curriculum standards. As a result the curriculum was revised to modify the previous emphasis on the simple delivery

Table 1. Number of institutions, teachers and the enrolment in schools of Japan

School stage	School year	Number of institutions	Number of full-time teachers	Enrolment		
				Male	Female	Total
Kindergarten	1971	11 180	68 607	876 118	839 638	1 715 756
	1977	13 854	93 988	1 254 268	1 199 419	2 453 687
Elementary (primary) school	1971	24 540	374 883	4 907 390	4 687 631	9 595 021
	1977	24 777	433 169	5 545 169	5 274 487	10 819 656
Lower-secondary school	1971	10 839	224 646	2 396 584	2 297 666	4 694 250
	1977	10 723	243 110	2 544 546	2 432 562	4 977 108
Upper-secondary school	1971	4 791	204 543	2 113 627	2 056 874	4 170 501
	1977	5 028	230 704	2 210 931	2 164 515	4 375 446
Technical college	1971	63	3 369	46 058	649	46 707
	1977	65	3 712	45 961	801	46 762
Junior college	1971	486	14 910	45 711	225 862	271 573
	1977	515	15 917	45 170	324 227	369 397
Miscellaneous schools	1971	8 056	48 155	421 536	887 354	1 308 890
	1977	6 102	30 442	390 475	479 594	870 069
Special Training School	1977	1 942	15 803	99 918	257 331	357 249

Table 2. Number of institutions, teachers and students in universities of Japan

School year	Number of institutions	Number of full-time teachers	Number of students					
			Undergraduate			Graduate		
			Male	Female	Total	Male	Female	Total
1971	389	78 848	1 144 893	259 293	1 404 186	37 873	3 764	41 637
1977	431	95 470	1 356 603	390 454	1 747 057	48 101	5 150	53 251

Table 3. Transition in ratio of students' advancement to higher-level schools

	School year	1971	1972	1973	1974	1975	1976	1977
Ratio of pupils' advancement to upper secondary schools (percentage)	Male	84.1	86.2	88.3	89.7	91.0	91.7	92.2
	Female	85.9	88.2	90.6	91.9	93.0	93.5	94.0
	Average	85.0	87.2	89.4	90.8	91.9	92.6	93.1
Ratio of students' advancement to universities and colleges (percentage)	Male	32.5	35.7	37.5	39.9	43.0	43.3	41.9
	Female	20.8	23.7	26.6	29.3	32.4	33.6	33.3
	Average	26.8	29.8	32.2	34.7	37.8	38.6	37.7

Education in countries of Asia and Oceania

of knowledge. Instead, greater importance was attached to developing the ability in students to think things through by themselves.

The courses of study also carried increased emphasis on moral and physical education and on the development of inventive ability in the students. The content area of the various subjects was reduced by encouraging teachers to concentrate on key points.

As the introduction of new curricula is always related to the rate of production of new textbooks, implementation takes time. By 1980, the new curriculum should have been fully implemented in the 'elementary' schools and in the lower-secondary schools by 1981. The curriculum for upper-secondary schools has also been revised and was introduced in 1978 for the first time. It will have been fully implemented by 1982.

Upper-secondary education, which is growing very rapidly year by year, presents special problems. The Curriculum Council, in considering future courses of studies, adopted the following general guidelines-

1. To ensure that students in the upper-secondary schools have mastered the content of the curriculum of lower-secondary schools;
2. To provide diversified courses of studies so that students in the middle and upper grades can receive education according to their individual abilities and aptitudes;
3. To reduce the number of school hours and the number of credits required.

Promotion of kindergarten education

The promotion of education for children of pre-school age has for some time been regarded as an important policy matter in Japan. In 1971, the Central Council for Education drew attention to the importance of education for the pre-school child and to the growing social demand for kindergartens. As a result, the Government decided on a systematic expansion of the number of kindergartens so that all children in the four- and five-year age group might be accommodated by 1982. By 1977 some two-and-a-half million children had been enrolled in kindergartens and the process of development of pre-school education well matches the requirements of the plan for full implementation by 1982.

Special education

There are three types of schools in Japan to serve mentally or physically handicapped children. They comprise schools for the blind, for the

deaf and for mentally retarded and crippled children. Local government authorities are required to establish these schools, and the parents of mentally or physically handicapped children are required to enrol them in appropriate establishments. The application of compulsory education in this area has been postponed until 1979, by which time there will be sufficient schools to meet the enrolment needs.

In addition to the provision for special education mentioned above, programmes are also available for handicapped children in special classes in the elementary (primary) and lower-secondary schools.

Improvements in the working conditions of teachers

In view of the importance of the school in relation to character building for the youth of the country, the Government in 1974 initiated special action to provide better pay for teachers. The salaries established were higher than those offered to other categories of public-service employees and this made it easier to secure the services of teachers of high quality.

The increases in salary were brought about by three stages from 1974 until 1977. Extra allowances were also provided for experienced senior teachers. Other provisions, such as maternity leave for female teachers, have substantially improved the working conditions of the teaching profession in Japan.

Expansion and reform of higher education

Higher education in Japan has expanded swiftly in recent years and is now very extensive. The expansion has not, however, taken place systematically, and problems such as imbalances in geographical distribution and in academic offerings have emerged.

In an attempt to deal with these problems, a Higher Education Consultative Committee was established in 1972 to prepare a long-range plan for the improvement of higher education. By 1976 the Committee had produced its report in which a plan for the next decade was formulated. The plan was applicable not only to the conventional universities, but also to correspondence university courses, special training colleges and the 'university of the air'. The plan dealt with the need for qualitative improvement in university offerings and recommended that the concentration of universities and junior colleges in large cities should be curbed. The Ministry of Education is now taking various measures to control the establishment and expansion of private universities and junior colleges in major urban areas.

Education in countries of Asia and Oceania

In addition to the issues of the expansion and improvement of higher education, noted above the Government is concerned to encourage multi-lateral development of higher education as a whole. Major steps taken to achieve this include:

1. The establishment in the universities of new forms of basic educational and research units to replace the conventional 'faculty';
2. The introduction of greater flexibility in the offerings of general cultural courses;
3. Agreement to the acquisition by students of credits for various subjects at a variety of institutions, including foreign universities;
4. The adaptation of medical and dentistry courses to a new form of integrated education in which a two-year general education course is followed by four years of specialization.

Parallel with these new measures, projects are also underway for the establishment of new institutions of university level which are free from conventional notions of the university. Examples of new institutions include the University of Tsukuba,¹ the universities of technology and science, the universities of education and the 'university of the air'. These new institutions will, it is hoped, provide prototypes for reform measures to be undertaken independently by other universities.

Improved selection methods for university entrants

In the past, students who wished to enter university were selected through an entrance examination administered by the particular university to which they wished to be admitted. This resulted in most students trying to gain admission to a small number of well-known universities and this, in turn, led to grim competition for admission. In order to prepare students for these examinations, the upper secondary schools had to extend the scope of their courses in an endeavour to ensure that students stood some chance of succeeding in the admission competition. This resulted in a disruption of the normal courses of education in the upper-secondary schools.

In 1971, the Ministry of Education, much concerned with the unsatisfactory situation, decided to consider the introduction of a combined achievement test for all universities. In 1977, in pursuance of this policy, the Ministry of Education established the University Entrance Examination Centre as the agency for the first achievement test for admission to all national and public universities. The first students to gain admission to university through this achievement test will enter in 1979.

1. Briefly reported on in *Education in Asia and Oceania, reviews, reports and notes*, Bangkok, Unesco, 1978.

Development of graduate schools in universities

The graduate school system in Japan has played a key role in the advancement of science and research. Yet, with the demand for expansion in higher education and the need for advances in research standards to match other developments in society, there is growing opinion that the graduate schools should be reformed.

The University Establishment Council has been considering this matter since 1971 and a number of enactments have been introduced since that date. These statutory measures have led to the following developments:

- a) It has been made possible for post-graduate courses to become independent from under-graduate courses through the initiation of the so-called independent graduate school system. This permits the establishment of institutions having only post-graduate courses;
- b) The training of highly specialized vocational personnel as well as researchers has been defined as one of the key objectives of the master's degree course in education;
- c) The duration of doctoral courses has been made more flexible and the educational methods for these courses in the graduate schools adjusted accordingly;
- d) A new comprehensive doctorate, entitled, 'Doctor of Interdisciplinary Research' has been created to meet the need for integrated research.

Social education

Social education in Japan is concerned with education as a part of community activities designed to strengthen mutual solidarity among citizens through programmes for people of all ages. Efforts are now being made to extend social education activities through schools, homes and society. Emphasis has been given to the special training of social education instructors and there has been systematic expansion and improvement of national youth centres. Programmes have also been designed using mass communications media to help learning, and the overall project has included the expansion and improvement of libraries, museums, women's education centres and citizens' halls. These efforts are doing much to augment the opportunity of lifelong learning for the people.

Other educational reforms

Two other types of educational reform have made some impact on the overall pattern of education in Japan. The first concerns the private sector in education in which enrolment accounts for 29 per cent of all

Education in countries of Asia and Oceania

upper-secondary students and 79 per cent of all students of higher-education institutions. These private schools and universities are making an outstanding contribution to the development of education as a whole and, in view of their important role, the Government enacted a law in 1975 to increase the financial aid given to them. The subsidy to private universities which has been increasing annually will, it is hoped, eventually contribute to half of their educational and research costs.

Second, Japan has some 8,000 so-called miscellaneous schools with a total enrolment of more than 1.5 million. These schools have taken a significant part in response to social demand for education directed towards vocations. In 1976, selected miscellaneous schools were accorded legal status as 'special training schools'. By 1977, there were 1,942 such schools with a total enrolment of 360,000. The courses offered include dress-making, cooking, nursing, hair-dressing and beauty culture.

Policies for residual education problems in Japan

Education in Japan has developed rapidly, thanks to the enthusiasm of the people, and to the tireless efforts of those responsible for educational modernization since the Meiji Era. Education has become, by



international standards, very heavily supported and pursued. The radical social changes in recent years have brought, however, a number of educational problems.

At present Japan is moving from the immediate past, which was characterized by high economic growth, towards a new economic period of stable economic growth. The international socio-economic environment as well as the relevant conditions in Japan have also been undergoing drastic modification in recent years. As a result, the people have come to have new expectations of education itself. Thus, while the reforms described earlier have greatly improved the status of education in Japan in recent years, several major shortcomings are becoming apparent and will require remedial action in 1980s.

Adaptation of primary and secondary education to meet the expectations of students and parents

Primary and secondary education are for most students the most important part of their total education. In the past, there has been an over-emphasis on intellectual education; this has not always met the real needs of the students. It is now planned to take various steps to ensure that school life better meets the exigencies of the actual situation. The Government, on the basis of a review of education over the past 30 years,



Education in countries of Asia and Oceania

has already introduced revised courses of studies in both the primary and secondary stages of the education system. It will be important in future to continue revision of the courses of studies available to the students, if possible adapting them to the different particular needs of students in various parts of the country.

A second step necessary for the improvement of primary and secondary education is the provision of highly capable teachers. In order to secure the services of fully competent teachers, it will be necessary to improve still further the working conditions of the teaching profession. This includes raising pay levels and reducing pupil-teacher ratios. The expansion and further improvement of in-service education for teachers is another necessary measure in increasing the effectiveness of education. The Central Council for Education is already considering the implications of these changes.

A third problem relates to the expansion and improvement of school facilities, especially the need for an increase in the number of upper-secondary schools where compulsory post-secondary education has rapidly expanded, spurred by high economic growth and the growing demand for higher educational qualifications. Primary and lower-secondary school enrolments have also shown sharp growth, and more new schools, and certainly *bigger* schools, will have to be built to accommodate entrants at all levels.

Higher education

The two main tasks in higher education in the 1980s will be in qualitative improvement and the reform of entrance examinations. Some efforts have already been made to bring about changes in both of these areas and the search for other solutions will continue.

In order to enable people to remain mentally alert throughout their lives, it is important not only to provide them with regular school education, but also to offer ample opportunities for continuing education. Lifelong education is a long-range, comprehensive task, for which possible methods are being studied at the Central Council for Education.

Finally, international co-operation in the field of education is of prime importance. Interchanges between Japan and other nations have in the past been concentrated mainly in the economic field. It is now seen to be essential to promote extensive international interchanges in the various fields of education in order to increase collaboration with other nations and promote international understanding. Hence, Japan is pursuing a policy of sending students and teachers overseas for study and accepting foreign students for study in Japan. This is a positive move

Japan

towards the promotion of education for international understanding. It is matched with continuing active and tangible co-operation with international institutions such as Unesco and the United Nations University.



THE REPUBLIC OF KOREA

Major educational developments

The 1970s have been a period of consolidation of gains made during the preceding decade, towards further social renovations and the achievement of national prosperity. Under this imperative the 'New Community Movement' (or *Saemal Undong*) was a major contributing factor in the rapid growth realized during the Third Five-Year Economic Development Plan and is expected to contribute to the successful conclusion of the plan currently in progress as well. *Saemal Undong* is a nation-wide movement training rural and even urban people in the benefits of diligence, self-help and co-operation.

During these socio-economic transformations, education in the country has had to meet the challenge of guiding the efforts of the entire nation by cultivating its human resources. The following is a summary of some of the major accomplishments in the area of educational development in the Republic of Korea since 1971.

Expansion of educational opportunities

One of the first issues tackled in the promotion of educational development was the entrance examination system. In 1969, the competitive entrance examination system for middle schools was dropped in favour of a system of promotion without examination. In 1974 a comparable result was achieved for the high-school level by substituting a lottery and allocation system for the previous competitive entrance examination system. Although this latter reform is being carried out on a gradual basis and only in selected areas (the five major cities in 1978, with seven more scheduled for 1979), it amounts to an immense transformation which, in effect, has established a non-competitive open-door policy for secondary education in the country.

In line with this trend towards universal and popular education there has inevitably been a gradual expansion of opportunities in the area of secondary education. This issue is immediately linked with that of the extent of compulsory education, which has received much attention in recent years. When compulsory education is extended, as planned, to

include middle school in the early 1980s, the trend towards universal secondary education is expected to be further accelerated.

Another factor contributing to a gradual increase in educational opportunities is the demand for skilled labour. This demand has risen sharply within the various technical fields as a result of the increasing technical sophistication of the country's industry. The further expansion of secondary education and even the extension of the level of compulsory education to include high school are predictable outcomes.

These projections are supported by the growth which has occurred in Korean education during the present decade. Between 1971 and 1977, for example, the number of middle schools increased by 10 per cent, of middle-school students by 50 per cent and middle-school teachers by 40 per cent. The comparable increases at the high-school stage were 40, 10 and 90 per cent respectively. (See Table 1 below). Moreover, the number of their graduates who went on to a higher stage increased by 12.5 per cent and 20.3 per cent in middle and high school, respectively. Finally, the number of institutions of higher education and their faculties both increased by 50 per cent while the students receiving education beyond the second level increased by 80 per cent over this same period.

Table 1. Number of secondary schools, students and teachers, 1971 and 1977, Republic of Korea

Items		1971	1977
Middle School	Schools	1 794	1 987
	Students	1 529 541	2 195 770
	Teachers	35 938	49 249
High School	Schools	898	1 215
	Students	647 180	1 350 600
	Teachers	22 315	41 864

Vocational education and occupational training

In addition to the firm foundation for heavy and chemical industries laid by the successful execution of the Third Five-Year Economic Development Plan, the great strides made in the six major strategic industries (electrical, electronic, chemical, machinery, shipbuilding and steel), have brought about a sudden increase in the demand for scientifically-skilled manpower.

Changes in the educational system have been made in order to satisfy this demand. The existing technical high schools, for example, which are the chief sources of supply for skilled manpower, have been developed, each with its distinctive concentration. A comparable change is being made in the organization of technical colleges. As a means of increasing

Education in countries for Asia and Oceania

specialization in these institutions, programmes are being geared to focus on one of four areas (machinery, electronics, industrial chemistry or manufacturing) and students are being trained to match these specializations.

The expansion of vocational education offered in technical high schools and colleges is complemented by the activities of some 972 occupational training centres. Eight-hundred-fifty of these are affiliated to industrial firms while the rest are either public or run by charitable organizations. Occupational training courses are also being offered in liberal arts high schools. There are other kinds of institutions which foster technical skills.

Promotion of educational reforms

The growth realized after 1970 made it necessary to increase the educational input into the process of national development. This intensification of the demands placed on education generated a crisis in Korean education. Accordingly, efforts have been made to plan and carry out various types of educational reform.

The major reforms undertaken since 1971, after opening the admissions system for secondary schools, include measures to promote greater equality of educational opportunities, an intensification of the educational activities of the New Community Movement, revisions of both the content and the methods of instruction, promotion of educational development in primary and secondary schools, establishment of experimental and specialized colleges, expansion of vocational education, and the introduction of a 'school-of-the-air' programme in which the facilities of radio stations are employed to broadcast special courses to a wide audience of students on a regular basis.

Beyond these reforms and related to the educational system and its adjuncts, the Korean Educational Development Institute (KEDI) and the Korean Advanced Institute of Sciences (KAIS) were both established in the 1970s. The former is an organization set up to promote technical research in the field of education while the latter has the function of helping to form training for high-level industrial personnel.

Promotion of reforms in higher education

Reforms in the area of higher education are being made from a long-range perspective. The Council for Educational Policies is performing an important service in this regard by analysing reform proposals and promoting research on higher education. Two policy objectives which have received serious attention in recent years are the firm establishment of

experimental universities and the introduction of greater specialization in the college of engineering.

There are at present 32 such universities playing a leading role in this crucial area of education. There are also four specialized colleges of engineering whose areas of concentration are machinery, electronics, industrial chemistry and manufacturing.

Educational activities of the New Community Movement

With the advent of the 1970s the activities of the New Community Movement reached a new intensity throughout the country. Based on the principles of diligence, self-reliance and co-operation, this national movement has transformed the country by encouraging the *people themselves* to work toward improving the environment, increasing the 'standard of living' and confirming national values.

The New Community Movement's educational activities are aimed at fostering a practical citizenry prepared to contribute both to the improvement of local communities and to national development. To this end, the educational activities of the movement are aimed at fostering its spirit among adults and students alike. The fundamental principles guiding these activities have been promulgated as the National Educational Charter. During the last half-decade, 158 permanent New Community Education Centres have been established and a specific course on the principles of the movement set up in every school in the country.

The New Community Movement is actively promoting a whole range of practical campaigns related to education. These are focused on the training of teachers, the conservation of resources, neighbourly mutual aid and community beautification. As a result, education has become an integral part of community development efforts and has made it easier to sustain the tempo of development from the national to the local levels. In short, this movement has created an educational climate brimming with an atmosphere of vitality which has strengthened the desire for learning among the residents of small communities and extended the scope of educational activities from the classroom to the society as a whole.

Radio and correspondence education

Radio and correspondence education is primarily aimed at providing young working people and adults of any age with the opportunity to receive the college- or high-school education they missed for economic or other reasons. Junior-college-level courses in home economics, business administration, agriculture, primary-school teaching and public administration have been offered in this programme since 1972. Some 20,000 students are currently enrolled. Fifteen-minute lectures are broadcast

Education in countries of Asia and Oceania

every day and teaching material is furnished for each of the courses offered. Six public and private universities as well as 11 colleges of education have been designated as collaborating institutions and their facilities made available for two-week periods during school holidays to make it possible to assemble the students following the broadcast courses twice a year for testing and reinforcement. Given the successes of this programme, the problems involved in setting up a four-year course are now being explored.

Technical high schools and junior technical colleges

Emphasis is being placed on fostering the growth of technical high schools so that they will be able to supply the skilled manpower needed to contribute to the development of heavy and chemical industries. The existing technical high schools are being reorganized into four types—Mechanical, Model, Specialized and General Technical High Schools. Moreover, the programmes and educational conditions in these schools are being improved to guarantee a more efficient utilization of personnel and facilities. The current plans call for high annual investment in facilities for these high schools. At the same time, bold steps for coping with badly-run private technical high schools are under consideration. A breakdown of the number of technical high schools by types and a description of their designated goals is given in Table 2.

Table 2. Types of improved technical high schools

Type of school	Designated purpose	Number of schools		
		Present	Planned increase	Total
Mechanical Technical High School	to develop high-grade specialized technicians for miniaturized mechanical industries	9	10	19
Model Technical High School	to foster skilled workers for overseas employment ventures and to serve as a model for general technical high schools	11	—	11
Specialized Technical High School	to train high-grade technicians to fill the needs of specialized industries	3	7	10
General Technical High School	to train a wide variety of technicians for general industries	56	—14	42
Total		79	3	82

A major reorganization of the system in junior technical colleges is now planned. This reform is intended to clarify their functions, to improve the professional training they give and to increase the originality of occupational education. The planned reforms include: (1) combining the existing junior and technical colleges into re-organized junior technical colleges; (2) changing the current unit system to a credit-point system; (3) changing the entrance requirements to admit only those who have been successful in the nationwide preliminary college-entrance examination; and (4) establishing an employment review system of faculties.

Reinforcement of the educational administrative system

The organizational structure of the Ministry of Education has been significantly reinforced. This step was taken to facilitate the formulation and proper enforcement of policies to cope with the increasingly technical and specialized content as well as methods employed in the field of education. It was also made necessary by the sharp rise in the student population and the increase in the number of teachers and kinds of educational organizations. Formerly there were two offices, seven bureaux and 21 sections in the Ministry. There are now one more bureau and four more sections. The new bureau was set up to reinforce administrative supervision of the teaching profession while the organization responsible for school affairs was raised to the bureau level and the functions of the former Textbook Compilation Bureau were absorbed by the Office of Educational Supervision.

Two high-level institutes

The Korean Educational Development Institute (KEDI) was established in 1972 to promote independent research at the national level. Its objective is to contribute to national education from the long-range point of view. One of the major areas of concern at the moment is the determination of the goals, content and methods of education best suited to both current conditions in the country and the Korean tradition. Sustained research efforts are being devoted to this problem. A second major area of concern is the study and development of rational solutions to the pressing problems in education. A third major focus is on an educational broadcasting system and the exploration of ways to make the most effective use of the distinctive features of this educational tool. A broadcasting station has been built and will soon be operational.

The institute has promoted research in a wide variety of other areas of education as well, including (1) the improvement of textbooks used in primary and middle schools; (2) the establishment of middle- and long-range educational planning; (3) the development of educational evaluation

Education in countries of Asia and Oceania

range educational planning; (3) the development of educational evaluation systems; (4) the elaboration of training programmes for teachers; (5) the educational activities of the New Community Movement; (6) educational activities related to population and environmental problems; (7) an exploration of the conditions in technical education.

The Advanced Institute of Science opened in 1973 as a special graduate school aimed at fostering the advanced personnel development needed in highly sophisticated scientific and technical fields as well as to make practical applications to the needs of industrial development. The institute was established as a legal entity in order to preserve the independence and autonomy of its operation as an academic institution. At present, 614 students are enrolled. The major subjects offered are production engineering, industrial engineering, and chemical engineering. The departments include mechanical engineering, industrial engineering, biological engineering, mathematics and physics, electricity and electronics, telecommunications, and chemistry and chemical engineering. Degree programmes include a two-year master's course, a two-year technician's course and a four-year Ph.D. course.

Efforts to democratize education

In recent years, the Republic of Korea has been promoting advanced educational policies aimed at applying the principle of equality of opportunity from the qualitative and quantitative points of view as well as in terms of economic and regional dimensions. The following projects have received particular emphasis.

Free distribution of textbooks to students. Despite the limit on the funds which can be made available for educational purposes, there has been a gradual expansion of the free distribution of elementary textbooks to strengthen the system of compulsory education. The percentage of primary school textbooks distributed free has increased from 75.1 per cent in 1977 to 85.6 per cent in 1978. The policy of supplying textbooks free of charge is to be implemented in an order of priority beginning with children on islands and in remote areas and being gradually extended to cities. This policy is based on considerations of financial capacity. Also included is a plan to distribute a mixture of new and used books.

Meeting educational fees from public funds. It is proposed to meet educational fees from the public treasury so as to relieve parents of the cost of their children's education. With the idea of making compulsory elementary education completely free of charge, the fee exemptions, previously limited to the orphans of army and police veterans, very poor children and a few others, will be gradually extended to all children in the country by 1980.

Expansion of special education. Special education for those with visual and auditory deficiencies has been underway for some time but has not been organized on an adequate basis in terms of the techniques employed. The necessity for improvements has been recognized and a law to promote special education enacted. This law covers both the mentally and physically handicapped. Emphasis is placed on teaching the knowledge and skills needed in everyday life to enable them to make their contribution to society. The law provides for the establishment and operation of special schools for the handicapped in cities and provinces with a focus on autonomous regional organization.

The number of handicapped students presently receiving education in legally-recognized schools is 13,600. This is only 4.5 per cent of the total of 306,800 handicapped persons between the ages of 5 and 14. In the future, educational opportunities for the handicapped will be further expanded with the extension of compulsory education to include middle school. It is expected that the number of handicapped students receiving education in legally-recognized schools will grow to something like 15 per cent of the total by 1986. This is a reflection of the priorities the government has set for the Fourth Five-Year Economic Development Plan (1977-1981).

Compulsory middle-school education. Steps are being taken for the extension of compulsory education through middle school by the early 1980s. In connexion with this attempt, various measures will have to be introduced to eliminate the problems of overcrowding, make school management more efficient, expand educational facilities and to improve teaching and learning methods.

Adult education programmes. Educational opportunities are being provided for those beyond the school age through a variety of methods. One example is the technical schools and occupational training centres for adolescents who failed or dropped out of school. Technical schools were first set up in 1966. Their objective is to teach the rudiments of technical occupations in short courses running from three months to one year in order to assist students in selecting an occupation. As of 1977 there were 33 of these schools with approximately 3,000 students enrolled.

Ever since their establishment in 1962, occupational training centres have been sending a constant stream of graduates to industry. Generally, occupational training courses last from six to 12 months and offer instruction in basic skills related to the light, heavy or chemical industries.

In addition, there are also remedial schools for both the primary and secondary stages. These schools take an important part in the expansion

Education in countries of Asia and Oceania

of educational opportunities as one link in the education provided outside the regular school system, although as the percentage of students attending the regular schools is increasing, the number of remedial schools is declining.

Educational opportunities for women. There are no differences by sex in the availability of education in the Republic of Korea. In practice, however, the ratio of females receiving education is smaller, even though there is an upward trend in the number of females continuing their education. At the elementary and middle-school stages, the upward trend is more pronounced for female than for male students. On the other hand, it is a fact that the opportunities for higher education for women are less than for men. With current efforts, it is anticipated that the ratio of females continuing their education will continue to grow at all levels of education.

Educational promotion act for islands and other remote areas. The passage of this act in 1973 gave increased impetus to the efforts to eliminate the sharp differences in the quality of education by regions. The chief provisions of the act may be summarized as: (1) priority promotion of the system of free education; (2) the provision of special maintenance allowances for teachers in schools in remote areas as well as preferential treatment in personnel matters; (3) preferential treatment in supplying learning materials; and (4) special financial support for the schools.

An example of this preferential treatment for remote areas is the regional educational broadcasting station set up in Sinan County, South Cholla Province. There are some 773 islands along the southwestern coastline of the Korean peninsula served by this station. Within this area there are 106 elementary (primary) schools and three middle schools with a total student population of about 4,500 under the direction of some 1,100 teachers. A small-scale educational radio station is being operated at the country level. In addition to the broadcasting of basic learning programmes aimed at overcoming the differences in learning capacities among the students, training programmes are also being broadcast with the object of improving the instruction. Beyond these functions, the station is also used to broadcast educational programmes to those who have dropped out of school as well as basic information to all on ways to improve living conditions. Finally, it is also used to transmit administrative guidance and official communications so that it serves as a general broadcasting station. It is clear, therefore, that regional educational broadcasting stations of this kind can be of service in raising the general level of awareness in remote areas, in addition to fulfilling their primary purpose of eliminating the differences in the quality of education by regions.

Night-time educational opportunities. Beyond full daytime use of school facilities, it is imperative to expand activities, such as night classes and educational broadcasting, to provide educational opportunities for young working people as well as to make efficient use of unused educational facilities. The effectiveness of the broadcasting of high school courses is being increased by scheduling times which are convenient to the students and by having the government bear the cost of textbooks. In the case of the broadcasting of college courses the enrolment quota has been expanded to 24,000 students.

Moreover the possibility of expanding from the present two-year to a regular four-year course leading to the bachelor's degree is currently under study. Likewise, in order to expand the opportunities for night-time education, the enrolment quotas for the night classes in junior colleges and universities have been increased to 3,400 students. In addition, special courses have been established in technical schools to help young working people to raise their educational level. Finally, the opportunities for further education, as well as for refresher education, have been expanded for the young technicians employed in industrial enterprises.

Higher learning in provincial areas. Demand for higher education in the country is biased towards the institutions located in the national capital. This has produced a lack of balance between the institutions of higher learning in Seoul and those in provincial areas. In order to correct these qualitative and quantitative imbalances, universities and colleges in provincial areas have been given preferential treatment in terms of admission quotas, the offering of research grants to their faculties and the opportunities for positive involvement in governmental policy-making projects.

Efforts to enhance the efficiency of education

By 'efficiency' of education is meant the use of the most economic means to achieve the objectives of an organization and its activities. It is the desire to realize the maximum possible return from the smallest effective investment. Concretely, this implies assessments as to whether courses are managed properly in terms of educational objectives, whether financial and administrative supports are adequate and whether educational results are satisfactory. All of these evaluations are intimately linked with the question of educational efficiency.

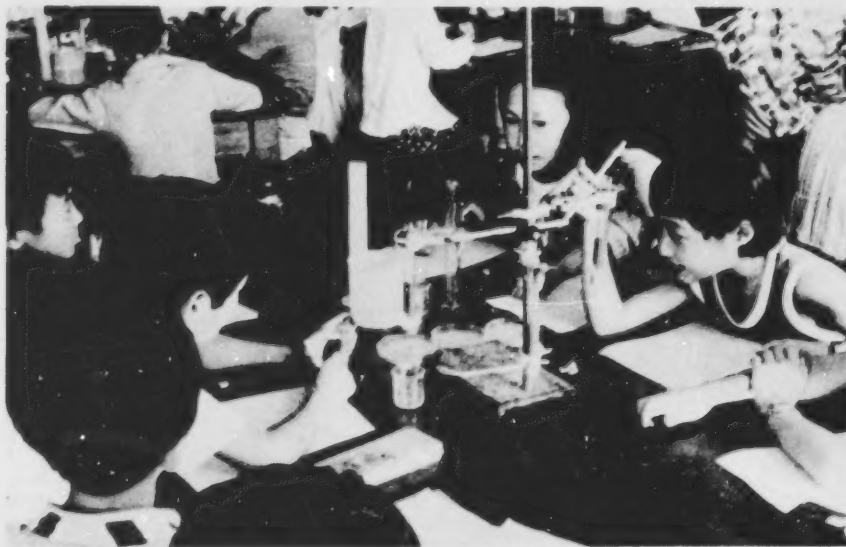
Elementary and middle-school project. The objective of this project is to research and develop a new educational system which will solve, in a rational fashion, the various problems facing elementary and middle schools. The primary moving force is the KEDI. Its fundamental goal is

Education in countries of Asia and Oceania

gradually to standardize schools all over the country. To this end, educational objectives and courses are under study in the interests of realizing greater clarity. At the same time, school and educational systems, teaching and learning materials, educational television and radio programmes and systems of evaluation are all being developed.

One of the goals of this reorganization is to set up a basic channel for co-operative interaction between the system of instruction and the administrative framework of the school. The attempts to devise a new system of instruction, in turn, involve the planning of model courses and the development of varied teaching and learning materials. After going through the five stages of planning, diagnosis, guidance, development and evaluation, the model courses are worked up into teaching and learning materials or as programmes for educational television and radio. The conditions for establishing a channel of co-operative interaction between the school administration and those who supervise school courses include a study of the relative responsibilities for teaching materials and the setting up of a teachers' council to harmonize the assignment of extra-curricular responsibilities.

Textbooks and teachers' aids. Work is underway to reform school curricula to make them more responsive to social demands to cope with the rapid political, economic, social and cultural changes of the present time. Included in this reform are textbooks, learning guides and teachers'





aids. The Ministry of Education is the planning and supervisory agency for the research on the compilation of these materials while the actual tasks are being carried out by research teams affiliated with research institutes and universities.

Increasing the efficiency of technical education. The necessity of developing technical education began to be clearly perceived in the late 1960s. Since then, technical studies have been established as one of the required courses in middle schools. The objectives are to develop a respect for labour from an early stage in the educational process, to teach the fundamental skills needed to live a useful life and to stimulate interest in creative productivity. There are many factors hindering the development of adequate technical education. In the first place, there are shortages of good teachers as well as of experimental and training facilities. Second, there are factors such as an educational methodology which formerly emphasized theory and a tradition of denigrating technical activities.

In order to solve the problems, the KEDI is carrying on research to devise policies to make technical education more effective. Projects already carried out include: (1) a survey of the actual conditions of technical education; (2) proposals for developing curricula for technical

education; (3) the development of models and methods to improve teaching in each of the technical subjects; (4) the compilation of learning materials; (5) the development of audio-visual materials; (6) the drawing up of criteria on the standardization of facilities; (7) the designation and support of model programmes; (8) the study of policies and programmes for the training of competent teachers for technical subjects; and (9) the development of textbooks.

Model schools are being operated throughout the country in order to verify the effectiveness of new teaching materials. They will then be revised and supplemented as needed on the basis of problems which crop up during this process. Finally, in order to further expand the opportunities for technical training at the middle-school level, these measures will be extended to an additional 200 middle schools next year and to all the schools in the country, on a step-by-step basis, over the next five years.

Operation of experimental universities. Education in a democratic society is conceived as a means for giving the highest possible expression, in socially desirable directions, to *individual* capacities. The experimental universities' system is an attempt to put this theory of education into practice. The objectives of this system are: (1) to extend the administrative autonomy of the institutions of higher learning; (2) to relax the overly rigid division of the academic year; (3) to recover the original purpose of the college-credit system by granting credit simply on the basis of the capacity to complete the academic work; and (4) to shorten the period of study for exceptional students.

As of 1973 there were 29 experimental colleges and universities among the total of 73 institutions of higher learning in Korea. Three more were added in 1978. The experiences gained have contributed to the qualitative improvement of the content and methodology of higher education in the country over the years.

Policies for college entrance examination repeaters. The insufficiency of facilities to meet the demand for higher education combined with the government's policy of setting admission quotas for the existing institutions inevitably results in a high failure rate in the college entrance examinations. The unsuccessful candidates for college admission become, in the end, a serious social problem. Many of them continue to study, either on their own or at special institutes and sit again for the examination in the following year. Some make several successive annual attempts to pass the examination. This not only constitutes a waste of national manpower but becomes a problem for society due to the negative impact it has on adolescents. In order to eliminate this phenomenon and to develop the

strength of the high-school diploma, employment opportunities for high-school graduates have been improved. Moreover, opportunities to raise the educational level while engaged in employment have been expanded.

More basically, guidance activities have been intensified in the high schools and vocational information centres established. The idea is to help students and at the same time to discourage unreasonable educational expectations. Finally, opportunities for higher education have been expanded at colleges and universities located in provincial areas, which institutions have in fact pursued an open-door policy in recent years.

Links between education and industry

The social functions of education are undergoing transformation as a result of the industrialization process. Education must be capable of supplying a sufficient pool of manpower to meet the demands which arise at each stage in the development process. On the other hand, industrial organizations, the chief consumers of this manpower, must also bear some of the responsibility for development. From this point of view there is a direct link between education and industry which means that they must be developed hand in hand.

Occupational training courses in high schools. About half of the graduates of general high schools go on to college while the rest have to choose an occupation. Under existing regulations the students of general high schools select one from among the three alternatives of liberal arts, natural sciences and vocational training. In practice, however, the strong bias towards continuing on to college leads to a strong preference for the first two alternatives. Beginning from this year, positive steps are being taken to stimulate interest in the vocational training sequence as one of the means for eliminating the exaggerated bias towards arts and sciences.

The establishment of middle and high schools in direct affiliation with industrial enterprises and under their management is a very effective way to promote the welfare of the employees of these enterprises. This may be the only way open to these persons to further their education. This is at the same time an effective way for the enterprises to develop the skilled manpower they need for their operations. The co-operative ties between labour and management are thus strengthened.

Five schools of this kind were newly established in 1977 with some 5,500 persons in attendance. By 1978 the number of these schools had risen to 14 and the number of students increased to more than 13,000. All of the operating expenses of such schools are met by the sponsoring

enterprises while the government compensates the investment in facilities through various tax exemptions. The operating expenses met by the enterprises include scholarships to students and research grants given to the teaching staff.

Expansion of special night-time classes. Special night-time classes have been expanded for much the same reasons that schools attached to industrial enterprises were set up. This programme utilizes the facilities of the regular school system during the hours when they would otherwise be vacant. In 1977 there were 15 of these special classes being offered in nine middle schools and 40 more in 16 high schools. Some 3,000 students were enrolled. In 1978, arrangements were made to accommodate another 6,000. In addition the salaries of the teaching staff have been increased and arrangements made for industrial enterprises to assume the burden of school fees. This kind of co-operation makes an important contribution to the formation of conscientious work habits, in addition to facilitating educational activities.

Special night-time courses are now being offered in junior technical colleges. These courses are aimed at: (1) supplying the demand for skilled manpower created by the development of heavy and chemical industries; (2) training on-site supervisory personnel; (3) providing opportunities for further study to technicians who are currently employed; (4) developing new technologies; (5) stimulating morale; and (6) increasing production. These courses are fully accredited and have a theoretical focus. The period of study is the same two years established for the daytime courses in the colleges. Tuition is paid by the Korean Traders' Scholarship Foundation.

In order to provide opportunities for the young technical workers who are currently employed in industrial enterprises to further their education or to receive refresher training, special night-time courses have been set up in technical high schools. Qualified young men are permitted to take these courses free of charge. Candidates must be middle-school graduates who have received a prize in an international or domestic competition for technical skills. In addition they must be qualified as assistant technicians or be currently employed as such.

Since the students in these courses already have actual work experience, the course work is a mix of the regular high-school material and the more advanced material used for training skilled technicians. Although theory is given pride of place during the first two years of these courses, the emphasis is shifted to actual practical work experience during the third and final year.

Training centres for industrial technicians. The overall purpose of these centres is to enhance the occupational opportunities in an industrial field for the graduates of general high schools who have failed the college-entrance examination. These persons are educated for a period of one year after which they may qualify for a Grade-Two certificate in a technical field. In 1977 there were 15 centres in operation with a total enrolment capacity of 20,000. These training centres are attached to the most highly developed technical high schools in the cities and provinces. Ninety per cent of the course work is on practical technical training.

The traders' Scholarship Foundation was set up early in 1974 by the Trades' Association of the Republic of Korea with the stated objective of promoting a variety of scholarly, cultural and educational activities. Particular emphasis has been placed on the awarding of scholarships to exceptional students among the children of working class families. The foundation provides general research grants, scholarships, support to promote general research grants, support to promote special research tasks, financial assistance for the publication of scholarly journals, funding for various scholarly meetings and support for international exchange programmes.

The prospect for social change

The current decade highlights some crucial inadequacies which must be immediately rectified. In this decade the Fifth Five-Year Economic Development Plan is to be launched. Economic growth will continue to be an over-riding concern, compelling education to concentrate on the development of productive manpower. The paucity of natural resources imposes upon Korea the need to pursue economic growth through foreign trade, with its competitive power based on scientific applications of technology. Economic growth is exclusively dependent on human resources which poses significant demands on the role of education. As the country develops into a highly industrialized society, the need to produce high-level technicians will become acute.

The development of heavy and chemical industry, expected to trigger a sharp increase in the demand for scientific and technological expertise, should result in technological innovation, knowledge explosion, rapid obsolescence of skills, and sophistication of living patterns. The increased demand for high-level professionals is certain to invite reforms in educational systems. As the average income rises—per capita income is projected to be \$2,360 in 1986—the actual demand for education will increase, with the attendant improvement of parents' capability to bear education costs. The knowledge explosion, together with a sharp increase in school

Education in countries of Asia and Oceania

attendance, will necessitate the extension of schooling and the diversification of course content and teaching methods through the broad application of media.

There will emerge certain social problems associated with the rapid progress of industrialization. The problems are related to value conflicts, dehumanization of the educational process, moral depravation, unemployment and the environmental destruction inherent in an open, technological society. All of these problems will increase in complexity and become very difficult unless fundamental solutions are applied. In particular, conflicting values will be the most difficult problem to deal with.

One of the most important questions to be faced in the future relates to the harmonization of materialistic values with spiritual ones. Any attempt to approach this question touches in the end on the moral content of education. Viewed in a broad context, this concerns the basic issue of education—that is, the improvement of the civic quality of people at large.



MALAYSIA

National policy

Malaysia has a multi-racial society. Hence the overriding objective of the country is national unity. This national objective is reflected in the New Economic Policy where emphasis is directed towards social integration and more equitable distribution of income and opportunities for national unity and progress. Essentially, the New Economic Policy spells out two basic strategies. First, it is aimed at reducing and eventually eradicating poverty by raising income levels and increasing employment opportunities for all Malaysians, irrespective of race. Second, it is aimed at accelerating the process of restructuring Malaysian society to correct economic imbalance and thus to reduce and eventually eliminate the identification of race with economic function.

In Malaysia, educational development is part and parcel of national development. As a result, all efforts in educational development are synchronized with national developmental efforts in order to achieve the overall objectives of national unity and the eradication of poverty by redressing the economic imbalances among the various races in the country.

National objectives of education

The government's major objectives of education and training are to:

1. Consolidate the education system to promote national integration and unity;
2. Orientate and expand education and training programmes toward meeting the manpower needs of the country;
3. Improve the quality of education for the building of a progressive society oriented towards modern science and technology;
4. Improve research, planning and implementation capabilities to meet the objectives listed above.

Specific objectives of education

Using the national objectives of education as guidelines, it is foreseen that, as a matter of priority, the Ministry of Education will channel its efforts and resources to promote national integration and unity through

the successful introduction in stages of the National Language (Bahasa Malaysia) as the main medium of instruction in schools. At the same time, the Ministry of Education will direct its resources to ensure the improvement of educational facilities in the rural areas so as to correct the imbalance in educational opportunities as between rural and urban peoples.

The areas in education that need special attention are the following:

1. Further consolidation of the national educational system in order to promote social, cultural and national unity;
2. Provision of educational facilities for increased enrolment at all levels of education occasioned by the increases in population and the improvement in transition ratios throughout the system;
3. Enhancement of the quality of education at all levels through the improvement in curriculum content, methods and organization as well as the improvement of other supporting services;
4. Placing of special emphasis on the sciences and on technical and vocational education;
5. Training teachers in sufficient numbers and of the highest attainable quality to meet the requirements for growth and qualitative improvement at all levels;
6. Spreading of educational opportunities more evenly throughout the country so as to correct the imbalance between the urban and rural areas, the rich and the poor.

Educational development: the issues

A priority in educational development is the need to consider what education can do to hasten the social, political and economic development of Malaysia which is not only multi-racial but multi-lingual. Fostering of a national consciousness and unity among the various races at all levels of society and redressing of the economic imbalances so as to provide equal educational opportunities for Malaysians in less favourable circumstances should be the main and overriding objective of the education system.

One of the main issues facing the Ministry of Education is the sheer increase in the number of pupils seeking education at the various levels in the school system. This is further aggravated by the fact that a proper balance has to be sought between general and technical/vocational education. Even in general education itself, there is a need to strike the right balance between the arts and sciences.

Enrolment figures for education are given on the next page.

Table 1. Development of the Education System
1971, 1975 and 1977 in Malaysia

Stage and type of education	Enrolment			% increase over period 1971-1977	% of all levels and types of education		
	1971	1975	1977		1971	1975	1977
Primary	1 457 698	1 586 909	1 609 335	10.4	73.3	67.1	64.1
Lower- secondary	403 565	561 471	632 753	56.8	20.3	23.7	25.2
Upper- secondary	97 349	164 727	197 282	102.7	4.9	7.0	7.9
a) Academic (Arts and Science)	91 874	153 415	183 528	99.8	-	-	-
b) Technical	1 556	3 683	4 863	212.5	-	-	-
c) Vocational	3 919	7 629	8 891	126.9	-	-	-
Post-secondary	11 930	16 335	23 028	93.0	0.6	0.7	0.9
a) Arts	5 885	7 880	12 236	107.9	-	-	-
b) Science	6 045	8 455	10 792	78.5	-	-	-
Teacher training	2 952	6 182	11 548	291.2	0.1	0.3	0.5
'College'	6 077	15 056	16 814	176.7	0.3	0.6	0.7
University	9 822	15 106	18 165	84.9	0.5	0.6	0.7
Total	1 989 393	2 365 786	2 508 925	26.1	100	100	100

Table 2. Enrolment ratio at the First and Second Levels
1975, 1976 and 1977 in Malaysia

Items	1975	1976	1977
Primary enrolment	1 586 909	1 602 635	1 609 335
6+ to 11+ population	1 652 946	1 681 404	1 711 397
Enrolment ratio: primary	96.0	95.3	94.0
Lower secondary enrolment	561 471	597 720	632 753
12+ to 14+ population	807 360	833 078	825 602
Enrolment ratio: lower secondary	69.5	71.8	76.6
Upper secondary enrolment	164 727	175 296	197 282
15+ to 16+ population	503 565	529 785	535 492
Enrolment ratio: upper secondary	32.7	33.1	36.8
Form VI enrolment	16 335	19 369	23 028
17+ to 18+ population	465 849	502 529	516 702
Enrolment ratio: Form VI	3.5	3.9	4.5



Although promotion is automatic for the first nine years of schooling; that is, from Standard One in the primary schools, it is observed that at each stage there is the drop-out problem. Ideally, we should aim at a 100-per-cent transition rate during the first nine years of schooling. The highest drop-out rate is from primary to lower-secondary schooling, and much of this wastage occurs in the rural areas. While it is sought to reduce this wastage and to provide equal opportunities for all, it is important at the same time to consider carefully how large the education pyramid is to be allowed to become. In particular the overproduction of school leavers with purely academic backgrounds must be guarded against.

The problem of improving the quality of education, particularly with regard to the training of under-qualified teachers and curriculum development, must also be dealt with. Wherever there are issues of quality, they are most severe in the rural areas. Hence, at all levels of education there is the need to intensify efforts to narrow the gap, in terms of the provision of educational facilities, between the rural and urban schools. This requires not only the construction of buildings and the provision of facilities, but improvement in quality as a whole. This will be a costly undertaking but the Ministry of Education is convinced that the benefits in terms of national development and unity will far outweigh the financial difficulties.

Strategies

In general, two strategies have been adopted by the Ministry of Education: first, to discover and identify the problems in their perspective and second, to provide the best solutions by taking into account the limits of the resources available. Most of the new developments in education, both quantitative and qualitative, reflect the attempt to provide solutions that are designed to solve specific problems.

In order to develop new ways of problem solving, programmes to formulate and introduce new approaches into the educational system have been introduced. These programmes are mainly to reconsider the methods and contents required to improve the quality of education.

Emphasis on science and technical education

The imbalance of educational opportunities available to disadvantaged groups, particularly the rural children and the poor, has been a major social and political problem. The setting up of fully residential science schools is one way of overcoming the problem. Ten such schools are at present in existence in suitable locations to provide added educational opportunities for pupils in the rural areas to pursue their education in the science and technical fields. The objectives of establishing such schools are to:

- Increase the enrolment of pupils to study the sciences;
- Open up more avenues for pupils in the rural areas to attend secondary schools which have a strong orientation to science subjects;
- Pool and concentrate resources to teach science and technological subjects; and
- Provide impetus for the development of personnel strongly oriented in science and technology.

The Ministry of Education provides technical and vocational education for suitable students who have completed lower-secondary education. The courses offered in the vocational schools are in the areas of engineering trades, agriculture, commerce and home science while the technical schools provide courses in building, mechanical engineering, commerce and agricultural science. In 1977 there were 23 vocational schools with an enrolment of 8,891 and nine technical schools having an enrolment of 4,863 students.

One of the main objectives is to develop technical and vocational education as an integral part of an overall system of education so that it trains individuals for given occupations by providing them with required skills and knowledge, together with general education, making possible the

Education in countries for Asia and Oceania

development of character and a capacity for understanding, judgement, self expression and adaptation to changing environments.

The training of technicians and junior executives working in engineering and business enterprises is being conducted at the Ungku Omar Polytechnic at Ipoh. Two-year, full-time courses are provided in engineering technologies and business studies and a three-year course in accountancy is offered as well.

A second polytechnic was established in Kuantan in 1976. As a start, three courses were introduced. These are electrical engineering, civil engineering and mechanical engineering. In 1977, with the establishment of the new polytechnic, the total enrolment in both institutions was 1,495.

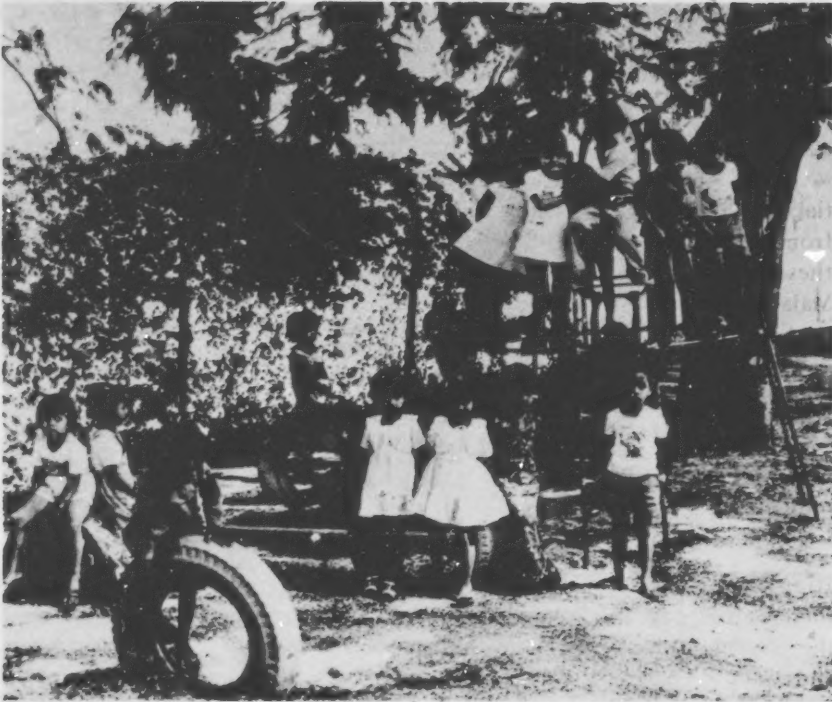
Higher education

Higher education facilities have expanded rapidly in the last decade to meet the needs of the expanding sectors of the economy which require personnel having higher education. There is a particular need for those with scientific and technical training. The governments' efforts to develop the Science University of Malaysia in Penang fully, resulting from the upgrading of the former Technical College in 1972 and the Agricultural College in 1973 to the status of a university, will further accelerate the expansion of higher education in the field of science and technology. Efforts are also being made to consolidate degree courses and expand diploma-level courses at the MARA Institute of Technology, the Agricultural University of Malaysia, the University of Technology of Malaysia, and the two polytechnics whose combined outputs will meet the requirements at the sub-professional level.

Redressing the rural-urban imbalance

In conjunction with the Ministry of Health, a Joint School Health Programme was launched in 1968 with the main purpose of co-ordinating School Health Activities. The programmes deal specifically with all levels in the areas of Health Instruction, Health Services, Healthful Living (Physical and Social Environment) and co-operation between the school and the community for health.

In 1970, a pilot project called the Applied Food and Nutrition Project was started in Kuala Langat, Selangor. The project was evaluated in 1973 and it was decided that the project should be expanded to the rest of the country. The project takes an integrated approach to the Economic, Educational, Health and Sanitation, and Supplementary Feeding aspects of food and nutrition through an intra-departmental and inter-departmental approach.



One of the major areas tackled by the Applied Food and Nutrition Project is the School Supplementary Feeding Programme. The current supplementary feeding in schools is sponsored by voluntary agencies. The Ministry of Education provides the administrative support for co-ordination and follow-up.

The primary school as part of the education system plays a critical role in providing basic knowledge and experiences which influence the direction of an individual's choice as to whether to continue study or elicit opinions as to whether education acquired in the primary school has any bearing for the future. It is the intention of the Ministry of Education to ensure that pupils from all areas have a more equal opportunity to benefit from the educational system. In this connection, the Ministry of Education is adopting two approaches with regard to the small uneconomic schools, namely:

- Where possible, small schools need to be combined to form a more viable educational unit. This may involve the provision of hostel facilities or transportation for pupils to a more-distant school.

Education in countries for Asia and Oceania

- In cases where such grouping of small schools is not possible, the Ministry of Education is considering altering the system whereby additional funds and teachers are allocated to small schools. This, however, is done with the realization that it will make small schools appear even more costly.

The Ministry proposed the establishment of ten more fully residential schools during the Third Malaysia Plan. This will enable 8,400 pupils from rural areas to get good education from fully equipped schools. With these new institutions, the total number of fully residential schools in Malaysia will be 30. It is expected that 25,000 pupils will be studying in these schools every year.

In respect of school residential facilities, the Ministry aims at providing more hostels to accommodate students, particularly those from rural areas. A total of 191 school hostels will be built. They will accommodate about 26,000 pupils.

Innovation in teacher training

In the Teacher Training Division of the Ministry of Education, operations in the recent past have been based on two guiding principles. First, there is the need to provide as many trained teachers as possible to meet the growing school population both at the primary and secondary levels, and second, there is the need to train relevant subject teachers, in particular in science and mathematics. Coupled with this is the overall shift in emphasis in the teacher training objective itself.

Prior to 1973, teachers for primary and secondary schools were trained separately, using different curriculum content. The orientation then was more academic than pedagogic. Since 1973, teacher training has been integrated. This means that, irrespective of whether a teacher is a primary or secondary school teacher, the training is similar in all respects. Alongside this new undertaking, the teacher-training curriculum has also been revised extensively to include more pedagogic components, all in accordance with recommendations of a 1969 Manila conference.

A new approach has also been adopted in the design of in-service courses. This involves the training of key personnel who will subsequently undertake the training of other teachers at the State or district levels. As a result, the demands on financial and personnel resources have reduced drastically. The main objectives of in-service teacher education are to:

- Extend the professional knowledge and experience of teachers in various disciplines;
- Orientate teachers towards new developments in teaching methods and techniques;

- Assist teachers to gain proficiency in the use of Bahasa Malaysia as the main medium of instruction;
- Upgrade the competency of teachers of English as a second language;
- Provide an introduction to school administration and management for head teachers and organizers of schools.

With the emphasis on the teaching of science and mathematics, 'crash' training programmes for science teachers are being conducted at the University of Agriculture and at the University of Technology. This is to increase the output of graduate teachers of science and mathematics, thus adding to the normal output of graduate teachers by the universities.

Educational media services

The Educational Media Service Division was set up in 1972 in order to supplement the Ministry's educational programme for schools, particularly in the rural areas, and to improve the quality of education by demonstrating good teaching models through the provision of additional audio-visual materials. Among other objectives, the service aims at:

- Assisting in curricular reforms through speedy and effective delivery of new curriculum material;
- Motivating pupils through interesting programme materials using audio-visual techniques—thus enabling teachers to devote more time to individual attention in large classes;
- Assisting in teacher-training programmes, both pre-service and in-service, through the employment of new media techniques;
- Assisting in the teaching of technical and vocational subjects;
- Promoting civic consciousness and national unity through civic programmes;
- Improving standards in Malaysian and English languages;
- Improving and expanding interest in the humanities and other subject areas such as arts and crafts, physical education and music;
- Experimental development of teachers' handbooks and pupils' learning materials through graphics, puppetry, tape, cassette, film and animation;
- Disseminating information of educational interest to parents, and keeping teachers up-to-date on curricular innovations and practices through "World of Education" programmes.

Education in countries for Asia and Oceania

The main function of the Educational Media Service Division of the Ministry of Education is to implement the Ministry's policy and objectives through ETV, Radio and AVA, as follows:

- Planning and production of programmes for broadcast to schools through radio and TV;
- Planning, production and distribution of AVA materials to schools and institutions;
- Equipping and organizing a film-library service for the loan of educational films, film scripts and AVA materials to schools and other institutions.

The TV programmes that are telecast, and other policy matters, are decided upon by an advisory committee under the chairmanship of the Director-General of Education with representatives from the various divisions of the Ministry of Education and from the Ministry of Information and Ministry of Communication.

The Educational Radio broadcasts its programmes in four languages—Bahasa Malaysia, English, Mandarin and Tamil. The subjects involved are wide. They include languages, literature, music, social studies, religion and civics. Apart from this, Educational Radio producers not only formulate programmes based on the school syllabuses but also general programmes such as 'World Education'—a programme for parents which indicates the main changes and progress in the field of education; 'Student World'—a programme on similar topics.

The library service in schools also has a vital role to play. Mainly it acts as a focus for developing interest among students in learning and acquiring skills for seeking the information that is required—and knowing how to use it once it is found. So it is very important to have such a service in all schools with proper rooms and a well-catalogued library.

The Third Malaysia Plan includes the following proposals:

- To build 901 library rooms for primary schools at a cost of M\$11.3 million and 231 for secondary schools at a cost of M\$4.8 million;
- To provide extensive in-service training to library teachers;
- To provide additional grants to schools for library furniture and books.

Curriculum

The Curriculum Development Centre was established in 1972 under the joint funding of the Development Bank for Reconstruction and Development, and the United Nations Development Programme to stabilize and systematize curriculum development. This Centre is perceived to be a

nerve centre for overall activities designed to initiate changes or reforms in the school curriculum. The Centre has the following main functions:

- Identifying national needs and aspirations and translating them into curricular specifications;
- Conducting curriculum research and experimentation;
- Planning and developing curriculum-monitoring for continuous, systematic and qualitative development in education;
- Developing and producing curriculum materials such as syllabuses, teachers' guidelines, students' learning materials, evaluation instruments, audio-visual aids, and prototype science and other equipment.

State Educational Resource Centres and Textbook Loan Scheme

In the two decades following independence, the educational programmes of the country have been directed towards fostering national integration and the nurturing of the younger generation to fulfill an effective role in meeting the needs of a rapidly evolving Malaysian society. Rapid quantitative expansion of educational opportunities is to be followed by a concerted effort to improve the quality of education in order to reduce wastage and increase the effectiveness of nation building.



Education in countries for Asia and Oceania

In order to attain this objective, the Ministry of Education has decided to give high priority to the systematic in-service training of all teachers in the country at the primary as well as the secondary level of education. In view of the magnitude of the problem, posed by designing, setting up and operating a programme from one central point, it has been decided to decentralize these functions to the States through the establishment of Educational Resource Centres in each State of the country.

The State Educational Resource Centres are to monitor the implementation of curriculum in various disciplines in both primary and secondary schools. The first Centre to be established will be in Kelantan and should be operational in 1980.

The Textbook Loan Scheme was launched in 1975. This scheme ensures that all pupils at the primary and secondary levels whose parents are from low-income groups receive the textbooks needed for their education.

Since textbooks play a major role in teaching and learning, it is important to monitor the content, production and usage of textbooks in schools. With effect from 1978, the Ministry of Education has specified that all primary schools use textbooks produced by the Ministry.

Conclusion

The approach adopted by the Ministry of Education in improving both quantitative and qualitative aspects of education in Malaysia is more or less based on identifying the problems and providing solutions to these problems. Thus the highlights of the new developments which have been enumerated have to a high degree reflected the *modus operandi*.

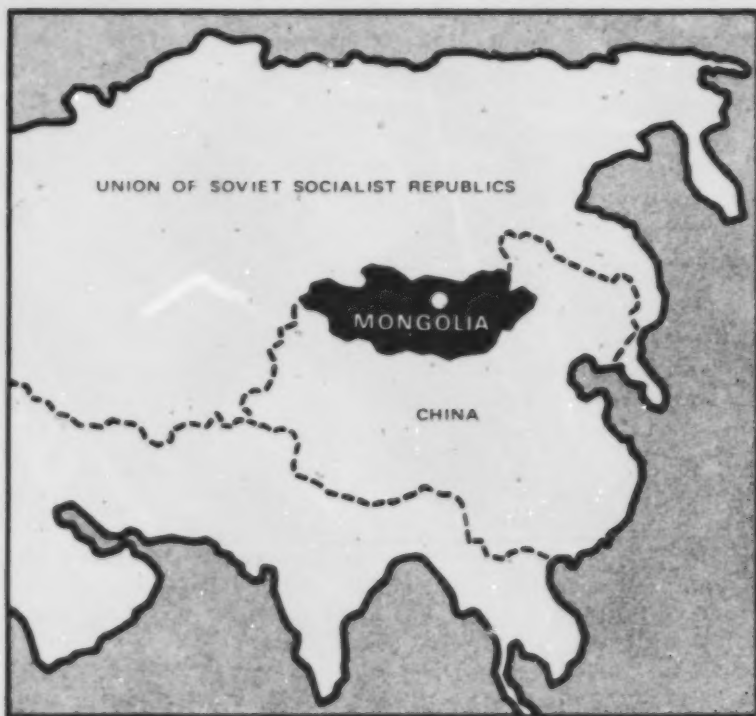
However, it is not safe to assume that progress is such that all educational problems are anywhere near being solved. It is in fact more realistic to recognize that there are still very big problems ahead, both those that have arisen as a result of the application of solutions and those that have been categorized as of low priority.

Attempting to solve these problems is a formidable task. It requires a large pool of resources, finance, personnel, technologies using both software and hardware and a host of other requisites. It is realistic to say that efforts made towards solving the problems should not be confined to the use of national resources but rather should be extended outside the national boundaries in order to utilize available expertise and experiences on a regional basis.

THE MONGOLIAN PEOPLE'S REPUBLIC

A poster which is very popular in Mongolia shows a horseman with banner unfurled charging through a dark gorge symbolizing capitalism. This is an artistic representation of the historical path taken by Mongolia, which, leaving behind the capitalist stage of development, has begun the process of constructing a socialist society.

The Mongolian popular revolution in 1921 opened the way for a radical transformation of the socio-political, economic and cultural life of the country. From then on, revolutionary transformations were effected in all spheres of the country's life; *inter alia* an immense amount of work has been done to organize national education on a democratic basis.



Education in countries of Asia and Oceania

Before the revolution Mongolia was a backward country in terms of economic and cultural development. For over 200 years it was under the yoke of colonizers who, perpetuating medieval relations, cruelly exploited the people and deliberately held back the development of the country's productive forces. In old Mongolia even production of artisanry was not developed, let alone modern industry.

The basis of the country's economy was extensive, nomadic animal husbandry, conducted by the most primitive methods. There was in the past no organized system of education, nor were there health, cultural or scientific facilities. Ninety-nine per cent of the population was illiterate.

In order to change radically the face of the country in a historically short period of time, the people, under the guidance of the Party and Government, completed a truly heroic task, displaying in the process genuine creativity. The Party and Government established the initial basis for a unified system of national education by organizing public schools with free schooling for workers' children.

On 14 August 1921, hardly more than a month after the victory of the revolution, the Party and the national Government took the decision to organize public schools. The first State public school, with 40 pupils and two teachers, was opened in the capital on 2 November 1921. Subsequently, the network of public schools was continuously expanded and by 1924 numbered 13, with an enrolment of 500 pupils. Although these primary schools had neither uniform curricula nor syllabuses, under the relevant decree they were all to provide teaching in eight disciplines, including Mongolian language, arithmetic, nature study and history.

It must be said that in view of the insufficiency of teachers in many cases, especially in rural primary schools, teaching was in the main limited to Mongolian languages and arithmetic. In 1923 the first incomplete secondary school was organized in the capital. Nine subjects were taught, including Mongolian language, mathematics, geometry, history, geography, physics and chemistry. Thereafter, the network of incomplete secondary schools began to grow steadily. The duration of schooling in incomplete secondary schools was seven years although, depending on the need for trained manpower in the economy, the duration was sometimes only five or six years. At that time many pupils with incomplete secondary education were sent to study in secondary and specialized educational establishments in the Soviet Union and other countries abroad.

One of the most important tasks for the development of national education was the training of teaching staff. For this purpose, in 1922,

Mongolia

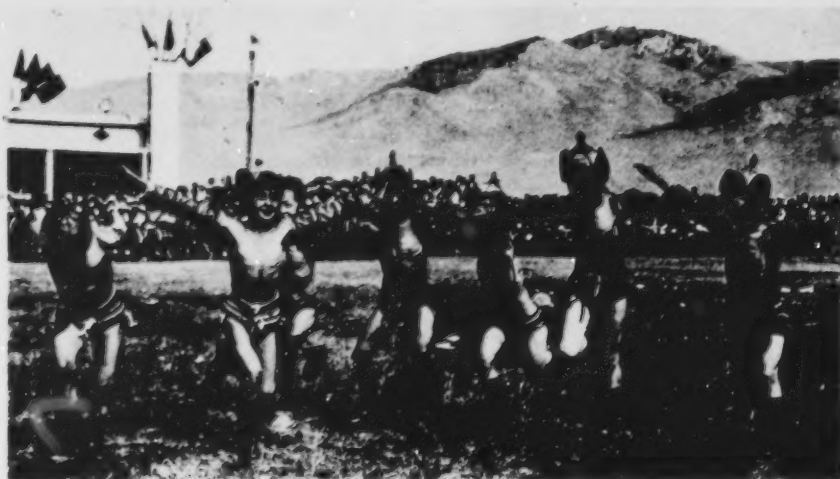
courses for the initial and in-service training of teachers were started; in 1924 these courses were reorganized and conducted in a teachers' training college.

The first complete (10-year) secondary school was set up in 1938. Subsequently, in 1942, the national university was founded. Thus, in a period of some 40 years, following the victory of the Popular Revolution in Mongolia, a unified system of national education had been established.

Later, educational institutions of all levels were expanded and developed, the number of establishments of higher education was increased and the entire system of national education was progressively improved. Today, in every part of the country there is an established network of pre-school establishments, schools for general education, technical and vocational colleges, specialized secondary schools and institutions of higher education. Besides this, the introduction of compulsory eight-year education for all is being successfully completed and one quarter of the citizens of the country are studying in an educational institution.

The creation and development of a unified system of national education is fully and completely based on democratic principles. All citizens of the Mongolian People's Republic have equal access to education regardless of ethnic or national origin, sex, religion, financial means or social status; education is compulsory for all children and adolescents.

All educational institutions belong to the State and the people and provide education free of charge. Some of the pupils are fully sponsored



Education in countries of Asia and Oceania

by the State and pupils and students receive grants and other financial assistance. There is a free choice of language of instruction.

The national system—which is co-educational and secular—is unified, every educational establishment forming part of a logical sequence of instruction. This ensures that pupils can progress from the lowest level of education to the highest. There is, moreover, unity of teaching and communist up-bringing, with collaboration between the school, the family and society in the development of children and young people. The content and methods of education are scientific in character and are constantly being improved on the basis of the most recent achievements in science, technology and culture. Attention is also given to humanistic and moral values.

One of the major democratic features of national education in the country is the fact that the Party and the Government have devised and implemented rational measures for the total eradication of illiteracy among the population. At the time of the 1921 revolution, only one per cent of the entire population being literate, an enormous amount of work had to be done in order to turn Mongolia into a country of total literacy.

The eradication of illiteracy among the population is being achieved in various ways: by study at home, through literacy-eradication circles, cultural and instructional literacy campaigns, the teaching of illiterate workers by semi-official public bodies, teaching enlisted soldiers in the People's Army to read and write and then using this knowledge in the teaching of specific general education subjects, development of the movement of "each one teach one", the provision of various school books and teaching manuals, and special sections in newspapers and magazines to help those who are learning to read and write.

As a result of the vast amount of organizational work on the eradication of illiteracy that had been done by the late 1950s and early 1960s, everyone in the country over the age of eight has become literate. In short, the country has been able to overcome and eradicate the general illiteracy that was a legacy from the past.

In connection with the work carried out to eliminate illiteracy, and for outstanding services in disseminating and raising standards of literacy among the population, the Institute of Mongolian Language and Literature of the Academy of Sciences of the Mongolian People's Republic was in 1970 awarded the N.K. Krupskaja Prize established by Unesco. Thus it may be seen that democratic principles are being introduced in a far-reaching and consistent manner in the national education system of the Mongolian People's Republic.

NEPAL

Introduction

The National Education System Plan of Nepal (1971-76) was the culmination of a process of educational reform started as early as 1954. The Plan was aimed primarily at counter-acting the elitist bias of the inherited system of education by linking it more effectively to productive enterprises and egalitarian principles. It called for the unification of education into one productive system that would serve the country's needs and aspirations. The Plan sought to regard education as an investment in human resources for the development of the country. The aims of the Plan include:

1. Producing citizens who are loyal to the nation, monarchy and national independence, and who remain alert and active concerning their rights and duties under the system;
2. Developing, preserving, expanding and extending learning especially of science, technology and of the skills necessary for the development of the country including production of a cadre of capable workers able to shoulder responsibilities in every sector of national development;
3. Inculcating qualities such as moral integrity, habits of work, self-reliance, creativity, and aesthetic awareness; and
4. Preserving and developing the national language, literature, culture and arts.

Phasing of the Plan

The Plan was enforced throughout the country in three phases: (1) Experiment; (2) Implementation; and (3) Consolidation. It was introduced in two selected districts in the first year, in 13 districts in the second year, in 16 in the third year, in 20 in the fourth year, and in 24 districts in the fifth and the final year, 1976. The National Education System Plan has, in fact, emerged from the realization that the major constraint in accelerating the pace of development was not the limitation of

Education in countries of Asia and Oceania

material resources but paucity of managerial acumen and skills able to make productive use of the available resources. The delay and difficulty experienced in bringing about change in the countryside and of giving a spur to well-balanced and self-sustaining material development called for change in the inherited system of education so as to tune it to the realities and requirements of national development.

The Plan arranges the educational system into three precisely defined, interrelated levels; namely, primary, secondary, and higher education. The basic objective at the primary or first level is to make students proficient in the 'three R's'. The second level covers both pre-vocational as well as vocational aspects, and the level of higher education aims to fulfil the requirements for trained manpower as determined by the National Planning Commission.

Since the National Education Plan sees education as action-oriented and problem-solving, it lays strong emphasis on interjecting an applied bias in the new curricula. Recognizing the market for the three types of workforce in the country—local, regional and national—curricula have been designed for each level of education to match the needs of these different market situations.

The National Curriculum Development Centre has developed curricula for the primary, lower-secondary and secondary stages. Tribhuvan University has a separate centre which has designed curricula for higher education. To make sure that the objectives spelled out in the curricula are acted upon in the classrooms and workshops, the supervision system has been made efficient. The primary and secondary school supervisors engaged in the supervision work co-operate with teachers and students in teaching and learning situations. They also evaluate the performance of students and teachers in terms of actual productive work done, particularly in vocational areas. This has helped to improve academic achievement. Textbooks, written mostly in the Nepali Language, have helped to bring about a uniform teaching standard.

To bring about the psychological and attitudinal changes in the students of higher learning who will be called upon to shoulder the responsibility of national construction as leaders, legislators, administrators and entrepreneurs in future, the National Development Service has been introduced after the first semester of the degree level as a pre-requisite academic requirement. A prime objective of drafting university students for the National Development Service is to help them to know first-hand by working with people in rural areas the constraints that hamstring development efforts.

Reforms in the examinations in the higher education system have created a situation which renders academic success exciting as well as challenging to students. Under the new arrangements, the practice of conducting biennial examinations has been replaced by a semester system. Internal assessment has been introduced and educational institutions maintain progress records of their students. Students' performance in tutorial sessions, seminars and similar other activities is given more weight in the overall assessment of their achievement.

The National Education Committee does the greater part of general policy formulation. The Ministry of Education and Tribhuvan University must then implement the policies. National policies have now been reasonably well streamlined and reoriented, and priorities for education in the development programme of the nation well defined. One part of the endeavour is focused on the revitalization and monitoring of the adherence to objectives and standards of education, while the other is directed to assessment of curricula, methods of teaching and various types of educational activities, their output and impacts.

The projected primary-school enrolment for the five-year period was 64 per cent of school-age population. In fact, enrolments reached 70.1 per cent in the third year of the plan period and the literacy rate was estimated to be 22.30 per cent. To cope with the problem of drop-out, particularly among girls, measures have been taken to increase retention



in primary education by training more women teachers. The construction of more hostels for girls and the provision of free textbooks and materials have also helped in this respect.

To ensure proper implementation of the Plan, four Regional Education Directorates and 75 District Education Offices have been created. Decentralization of administration as well as of implementation and supervision has helped in providing a spur to overcoming unforeseen difficulties.

The Government constituted a mid-term Evaluation Team to study and report on the implementation of the Plan. The report of the mid-term evaluation was very encouraging as well as challenging. Recommendations of the evaluation report have been studied and reforms are being made where needed.

First level of education

The aim of primary education is the achievement of literacy and numeracy of children of the age group of 6 to 8 years. This modest objective is to be achieved through a common curriculum of three years' duration. Primary-school enrolment rose from 32 per cent in 1970 to 70.1 per cent in 1978, as cited earlier. The Royal proclamation on the eve of the coronation of His Majesty King Birendra Bir Bikram Shah Dev in 1975, making primary education free, has contributed substantially to the overwhelming growth in enrolment in the last three years. Free textbook distribution is another contributory factor in raising the enrolment level. Under this scheme, all primary school children of 25 remote districts and 15 per cent of those in the remaining 50 districts receive free textbooks. The policy of opening primary schools even for small numbers of children in remote areas has also contributed significantly to this rise.

Girls' participation, as compared with boys' is, however, very poor, representing slightly less than one-quarter of the total primary school enrolment. The major constraint is apparently apathy on the part of the great majority of illiterate parents to girls' education. To remedy the situation, efforts made to bring about an attitudinal change in the parents include the implementation of a special teacher training programme for women (equal access of women to education) and preferential treatment for them in the appointment of primary school teachers. In 18 remote districts, girls have free tuition in both primary and secondary schools. These measures should help to increase participation of girls.

In 1977, more than 769,000 children were enrolled in 9,067 primary schools throughout the country. The teacher/pupil ratio at this level stood at 1:33.



Second level of education

Lower-secondary education forms the first stage of secondary education, a four-year cycle. This, with the introduction of a pre-vocational curriculum, lays stress on character building and the formation of appropriate attitudes towards the dignity of labour. Pre-vocational studies are introduced in the final two grades and involve practical work in simple local crafts. At this level, common curricula have been adopted throughout the Kingdom. In 1977 the total enrolment in some 2,400 lower secondary schools was estimated at 227,000. This constitutes approximately 30 per cent of the total primary-school enrolment. During the Fifth-Plan period this ratio is to be raised to 50 per cent. The teacher/pupil ratio at the lower secondary level is 1:24. Girls' participation in the total enrolment at this level is about 19 per cent.

The upper-secondary stage branches out in three different streams—general, Sanskrit and vocational. Of the three streams, the general and the Sanskrit streams seek to give vocational orientation to the students by devoting 20 per cent of the total instructional hours to vocational studies. The vocational stream offers more intensive vocational courses, comprising 40 per cent of the total time for instruction. The aim of this course

Education in countries of Asia and Oceania

is to provide vocational training to the students with a view to preparing them for various development activities at the sub-national and national levels. The students graduating from these vocational schools have the added advantage of competing on an equal footing with those from other streams for admission to higher educational establishments.

Of 552 secondary schools, 120 offer the vocational stream. In all, 15 vocational subjects have so far been introduced at the secondary level. A great majority of these schools offer education and agriculture-related subjects such as agronomy, poultry, horticulture and animal husbandry. Urban schools generally offer such subjects as wood work, electrical work, typing and shorthand, office management, and book-keeping.

With a view to improving the quality of instruction through the application of innovative methods and techniques, the establishment of two regional, multi-vocational model schools and ten district model schools is underway. Two more regional model schools, one each in the remaining two regions, and 65 more district model schools, one each in the remaining districts, will be established towards the end of the current Fifth Plan.

More than 82,000 students were receiving secondary education in 1977, or about 37 per cent of the total lower-secondary enrolment. This ratio is just three per cent short of the Fifth-Plan target.

A comparative study of the second level of education (lower-secondary and upper-secondary taken together) between the years 1970 and 1978 shows that the number of schools has increased from 1,065 to 2,952, the number of teachers from 5,628 to 12,439 and the enrolment of students from 120,536 to 308,797.

Adult education

The New Education System plan has underlined the need for work-oriented programmes, the aim of which is to impart knowledge and skills relevant to the local situation. To this end, the Government has recently formulated the programme afresh with the focus on agriculture, health, *Panchayat* (local government) and social reform. The programme is being field-tested in eight districts. In this mode of programme development and its implementation, formal as well as non-formal methods are being employed. Since 1971, approximately 238,000 adults have been made literate. Literacy is estimated to have risen from 14 per cent in 1971 to 22.3 per cent in 1977.

At present, different ministries are engaged in providing adults with education about their respective development roles so that they can develop in their own way. The Ministry of Agriculture, for example,

conducts agricultural extension programmes, and other ministries also have their own programmes. This results at times in duplication, overlapping and confusion. In the circumstances, the Government has of late constituted a National Council for Non-Formal Education headed by a member of the planning commission with representation from each of the concerned ministries. The Council's functions include the provision of policy guidelines relating to non-formal education and co-ordination of the programmes being implemented by various ministries.

Production and distribution of educational materials

Following the changes in curriculum content and structure, all school-level textbooks have been rewritten in the national language by subject specialists. The writers, while preparing the textbooks, have kept in mind the new teaching and evaluation techniques. Along with the textbooks, other teaching aids like curriculum and teachers' guides have also been prepared. To ensure a regular supply of books, the responsibility for production and distribution of textbooks is entrusted to a single organization called the Janak Education Materials Centre (JEMC). For the distribution of textbooks, JEMC has entered into a contract with a private organization called Sajha Prakashan.

A science equipment centre and a radio unit also form parts of JEMC. The centre produces prototypes of science equipment and materials. It also manufactures some model scientific equipment, and prints and distributes handouts explaining techniques for preparing scientific instruments with the aid of locally available materials.

Teacher training and status of teachers

The teachers' crucial role in successful implementation of any educational reform is indisputable. Awareness of this has led to the establishment of the Institute of Education (IOE) as part of Tribhuvan University. The Institute has the sole responsibility for organizing pre-service and in-service teacher-training programmes for all levels of school education.

For teaching in the primary stage the qualifications required of teachers are the School Learning Certificate and pedagogical training. For the lower-secondary stage the qualifications required are a University Certificate with pedagogical training, while for the upper-secondary stage a University Diploma with professional training is required. Very many pre-service and in-service teacher-training programmes are in operation.

The Institute of Education, besides organizing these training programmes throughout its various campuses, has adopted different strategies

Education in countries of Asia and Oceania

such as on-the-spot training programmes and distance-teaching-cum-correspondence courses. As a step toward using educational technology, plans are being made to use radio for training purposes. Using these training facilities, a large number of teachers were trained for primary teaching. In order to attract women to teaching, a programme in progress offers both the upgrading of qualifications and training for prospective women teachers.

Whereas in 1970 only 26.6 per cent of primary school teachers and 17.4 per cent of secondary-school teachers had received training, by 1977 the figures for primary, lower-secondary and upper-secondary schools had gone up to 38, 39 and 56 per cent respectively.

Realizing that the expansion of training facilities alone cannot ensure teachers' participation in an adequate number of programmes, differential salary schemes for the trained and untrained teachers have been introduced. Trained teachers receive higher salaries than the untrained. This arrangement, coupled with the provision of payment of full salary during the training period, has prompted larger teacher participation in the training programme. Moreover, with the establishment of district Education Service Commissions responsible for teachers' appointment, promotion and the like, a sense of security has developed resulting in high retention in the teaching profession. Other benefits are under active consideration and will, it is hoped, further enhance the status of teachers and attract more people to this profession.

Recognizing the important role of science education in the social and economic development of the nation, the study of science in schools has been made compulsory from grade IV upward. For the promotion of science as well as its application, a separate Institute of General Sciences has been set up in Tribhuvan University. In addition to providing studies up to degree-level, this Institute conducts research programmes. A natural-science museum has been set up by this Institute.

For the production of school scientific equipment, a science equipment centre functions under the JEMC. The centre has produced some prototype materials for distribution to schools which, with the expansion of facilities, are expected to replace in future many of the science materials that are now imported. The centre has lately prepared kits of science equipment and distributed them to various districts.

Special courses designed to train science teachers for school education are also being organized under the Institute of Education. Science curriculum specialists frequently organize short-term training seminars for science teachers to help improve their teaching skills.

Following the recommendations of the Third Regional Conference of Ministers of Education in 1971, His Majesty's Government has established a National Science and Technology Council to formulate science policies, plans and programmes. The Council also sponsors research work relating to the adaptation and application of science and technology to Nepalese conditions.

Educational opportunities for 'disadvantaged' areas

As part of a policy to democratize educational opportunities, economically handicapped groups are being favoured. Free textbook distribution is a case in point. Further, the government pays the salary of all teachers of the 18 remote districts of the kingdom. The girls of these districts receive free schooling. From school level to university level, scholarships are made available to students from these economically handicapped areas. Every year, certain numbers of scholarships for higher studies abroad are allotted to students from these areas.

The teacher training programme for 'equal access of women to education' is providing needed encouragement to women. Three equal-access centres are already in operation. Admissions to these centres are strictly limited to girls from economically and socially handicapped groups and areas.



The schools in the hilly and mountainous regions do not have many trained or otherwise qualified teachers. The experimental teacher training programmes mentioned earlier are expected to help to remedy this. The proposed teacher-education programme through radio is intended to concentrate in these areas.

Supervision and research

Supervision has been made an integral part of the whole education system. As trained teachers are not available for all schools, the role of the supervisors has become of paramount importance in the implementation of many educational reforms. The first supervisory task is to examine the availability of physical facilities at the schools and find out whether or not the teachers are capable and are sufficient in number. The second task is to evaluate courses of study at each level. In order to give professional orientation and motivation to the supervisors, three-month intensive training is organized relating to various aspects of supervision. Separate supervisors are appointed for the first and second levels of education. At the second level, there are separate supervisors for general and vocational subjects. A pool of subject supervisors is also being created at the regional level to inspect and monitor school-based programmes and suggest changes for improvement. The supervisors assist in the short-term teacher training programmes also. A district primary supervisor is assigned 30 primary schools in the Kathmandu Valley and the southern border areas, while in the hilly and mountainous areas, 20 schools are allocated per supervisor. Similarly, a secondary-school supervisor is assigned ten and seven schools respectively.

Under the aegis of the National Education Committee, two experimental research projects are currently in operation. One, called "Education for rural development", includes activities like adult and functional literacy, health and agriculture education and other social service programmes for the community. The project has, through these community-oriented activities, succeeded in eliciting community support and participation in the school programmes. The other experimental project is designed to study institutional improvement through supervision. Here the main emphasis is on the strengthening of the school supervision system as a whole. The experiment is considered a success, as the supervisors after the training have been found to be interacting with teachers and helping them to solve their instructional problems.

Higher education

Entrusted with exclusive responsibility for the securing of different types of manpower, Tribhuvan University implements higher education

programmes within the framework of the new national educational policy. The University is currently running its academic programmes through the following Institutes and centres:

<u>Technical Institutes</u>	<u>Levels</u>
1. Institute of Engineering	Certificate, Diploma
2. Institute of Medicine	Certificate, Diploma
3. Institute of Forestry	Certificate, Diploma
4. Institute of Agriculture and Animal Sciences	Certificate, Diploma
5. Institute of Education	Certificate, Diploma, Degree and Research
<u>General Institutes</u>	<u>Levels</u>
6. Institutes of Humanities and Social Sciences	Certificate
7. Institute of General Sciences	Certificate
8. Institute of Commerce, Business and Public Administration	Certificate
9. Institute of Sanskrit	Certificate
10. Institute of Law	Certificate, Diploma

Three centres for specialized studies and research work functioning as organs of the University have also been established as follows: (1) The Centre for Applied Science and Technology; (2) The Centre for Economic Development and Administration; and (3) The Centre for Nepalese and Asian Studies.

Of the ten Institutes, five (three technical and two general) are located in Kathmandu Valley while the remaining five are in other parts of the country. These Institutes have altogether 67 campuses, some of which share common facilities. All three centres are based in the Kathmandu Valley itself.

Enrolments in various academic programmes of the Institutes are restricted to those qualifying in the admission test designed and administered by a body of specialists appointed by the University. The intake of Technical Institutes is determined on the basis of manpower estimates of the Fifth Plan. Thus the manpower production programme of the technical Institutes is tied up with job opportunities in the country. These Institutes also undertake problem-oriented research work in their various disciplines. In the year 1977, of the total of 24,297 students and enrolments in higher education, 7,823 were in the technical Institutes.

A separate faculty board for every Institute with representation from the consumer agencies periodically reviews all academic programmes and

suggests ways to improve them. The different subject committees under the faculty board are responsible for curriculum development and improvement.

For the expansion and promotion of technical education, the government has been relatively generous, despite the heavy strain on its finances, in the allocation of funds to build and expand the physical facilities of the technical Institutes. The Fifth Plan intends to raise the Institutes to diploma-level institutions and establish more technical campuses. As a measure to promote technical education, 40 per cent of students in every technical institute receive financial support until the completion of their courses.

Of the three centres, the centre for Economic Development and Administration conducts research programmes, training seminars and conferences on various aspects of economic development. The Centre for Nepal and Asian Studies carries on language research and research in history, anthropology and sociology with reference to Nepal and the other Asian countries. The newly established Applied Science and Technology Centre is initiating research into the adaptation and application of scientific knowledge to the local environment.

National Development Service

One of the main features of the educational reform in 1971, as we have seen, is the National Development Service programme at the higher education level. The main objectives of the programme are, first, to allow the students to experience the realities of rural life thereby making their higher education broader in outlook, and better attuned to the real development needs of Nepal and, second, to offer students an opportunity to help meet the country's development needs during their academic careers. The programme is being implemented initially as an integral part of the degree-level course. Application of the programme at lower levels of higher education is being considered. All students completing the first semester of the degree courses must join the service before they can begin the second semester. The students preparing for the service receive orientation in the various activities they are to carry out in rural areas. They receive a lump sum of 1,000 rupees for clothing and other needs, and a monthly allowance of 300-450 rupees for the ten months' service period.

During this service, the students work as teachers in local schools and participate in other rural development activities such as afforestation; health and adult education; agricultural extension; family welfare; and small construction works including water supplies, roads and bridges.

Administration and financing

Central Planning and operation have been decentralized to the regions and districts. Four Regional Directorates—one in each Development Region—and 75 District Education Offices—one in each district—have been established. Within the broad central planning framework, educational planning at the micro-level involves local participation through the District Education Committees and District Education Service Commission. The School management committees, which bear financial liability for teachers' salaries, have substantial administrative, managerial, supervisory and organizational powers.

Since the implementation of the Education Plan in 1971, public expenditure has been rising steadily from a total public expenditure of 63 million rupees in 1971/72 to 277 million rupees in 1977/78.* The proportion of expenditure on education to the total public expenditure has increased from 7.2 per cent in 1971/72 to 9 per cent in 1977/78. The Fifth Plan (1975-80) has allocated a total sum of 645.3 million rupees for development programmes in the education sector out of a total plan outlay of 6,170 million rupees in the public sector. Thus the share of the education sector is now about 10.4 per cent of the total expenditure during the Plan period.

The increase in educational expenditure is due mainly to the new financing pattern adopted after the implementation of the Education Plan. The government contributes 100 per cent, 75 per cent and 50 per cent respectively of the salaries of all primary, lower secondary and secondary school teachers. The provision of free primary education throughout the Kingdom has cost the Government a substantial proportion of the budget by way of a compensatory grant of 144 rupees per primary-school student per year.

At the university level, the entire costs including the extension and expansion of physical facilities of all the Institutes as well as of the University's central office are met by the government.

Problems and issues

Although primary schools normally provide three grades of education, in remote and difficult hilly districts, primary schools provide five grades so that children do not have to drop out after grade III in cases where no lower-secondary school is within walking distance from their homes.

* 11.90 rupees = one U.S. dollar.

Education in countries of Asia and Oceania

The problem of the high rate of drop-out, particularly at the first level, persists despite the introduction of free primary education and free textbook distribution. The apathy of illiterate people towards education is probably largely responsible for this phenomenon. The government, fully alive to the problem, is considering possible measures to improve the situation.

The low participation of girls at all levels, and the inadequate supply of trained and qualified teachers in general—and science teachers in particular—have long been causing concern to the government. The government has already undertaken some measures in this regard. Even so, the financial constraints severely limit the wide application of the programmes as stated in the preceding pages.

Despite the strenuous efforts to raise the literacy rate, the progress has been rather slow. The lack of motivation on the part of adults seems to be the main stumbling block. With a literacy level of around 19.2 per cent the task ahead for Nepal is still very great.



NEW ZEALAND

Major reforms and new directions have resulted from the influence on policy planning, and its implementation, of an Educational Development Conference held about ten years ago. Consultative planning will be the preferred mode of policy planning for education in the 1980s. Throughout the country there is debate on the role of the school in the social and moral development of children. Both early-childhood education and education for women are under examination and increasing recognition is being paid to the need to extend facilities and concepts in both spheres. New Zealand, recognizing itself to be a plural society, has deliberately introduced a multi-cultural bias into its education system, along with a renewed emphasis on second-language learning. A major review of the secondary school system has been undertaken, and the training and continuing education of teachers continues to be examined and reformed. Continuing education for all is expanding. New moves are underway to improve and broaden education in the rural sector through the provision of support services, and radio and television are increasingly recognized to be vehicles for national education.

Participation in educational policy making

In New Zealand, it is assumed that the creation and enactment of policy in educational matters is a public function. As a recent demonstration of this, when a National Development Conference was convened in August 1968, a Committee on Education, Training and Research was included, setting educational planning in the context of national development for the first time.

Following the conference, the National Development Council was established. Also created was the Advisory Council on Educational Planning (ACEP) as a sector council, whose purpose was to advise the National Development Council and Minister of Education on priorities in educational expansion. The Council institutionalized community participation

Education in countries of Asia and Oceania

in educational planning and established channels of communication whereby the educational needs of the community could be made known to those responsible for advising government.

In 1972, the Government took a further step towards involving the community in educational policy making. Representatives of educational employer and employee organizations and educational interest groups met and discussed the terms of reference for three working parties established to prepare reports for a new educational conference which became the Educational Development Conference. Emphasis was now placed upon community discussion of educational issues leading to regional seminars. ACEP and working parties on *Educational Aims and Objectives*, *Improving Learning and Teaching* and *Organization and Administration of Education* continued their work. Their reports together with ACEP documents, designed to promote widespread discussion of educational issues, were distributed early in 1974. Recently, the ACEP Council was renamed the Educational Development Council and will be an advisory body for the Minister of Education or else will have its own executive powers. At this stage, it is clear that the emphasis which arose from the Educational Development Conference on the desirability of public debate and discussion will continue, and it is also apparent that consultative rather than prescriptive planning will remain the preferred mode of policy planning for education in New Zealand.

Early childhood education

Recommendations for early childhood education, contained in a report *Directions for educational development*, affirm widespread public support for early childhood educational services and for their expansion until they are readily available to all who wish to use them. The report emphasized the need for services in new housing areas, in remote areas and other areas of special need. Significantly, while recognizing that parents living in these places need substantial help in establishing early education services, there was no suggestion that the State itself should establish them. Implied in every recommendation was the continuation of the partnership between the organizations—which establish and maintain the services, and the State—which gives professional, administrative and financial support.

The Government's major involvement in early childhood education continues to be with the free-kindergarten and play-centre movements which are given funds for buildings, equipment and running costs. These two organizations together cater for approximately 57,000 children between the ages of 2½ and 5 years. Both movements are facing difficulties

in expanding their services; meanwhile, it is increasingly clear that the services provided by kindergartens and play-centres are not appropriate for many families because both movements offer only half-day sessions for children and both depend on the voluntary services of the parents. Where both parents in a nuclear family work outside the home, their children of below school age need a service which provides for them for most of their waking hours. Immigrant families, particularly Polynesian families, lack the confidence or even the language to take the initiative and join the sophisticated kindergarten and play-centre movements. Children who live in remote areas have little or no access to group services. Localities of mainly transient residents lack the continuity of effort needed to provide the traditional voluntary State-supported early education services.

To meet these difficulties, the Government has taken a number of steps to support existing services and introduce new ones. Some of these measures have consisted of giving an increased amount of help of the type already available, and the provision of sites free of cost and increased grants for buildings and administration. Mobile pre-school units staffed by trained teachers have been established to take services to families which cannot go to them. To help isolated children, a Pre-school Section of the Correspondence School has been set up and, through correspondence, radio and occasional visits, helps parents to provide learning experiences for their young children at home and in the neighbourhood.

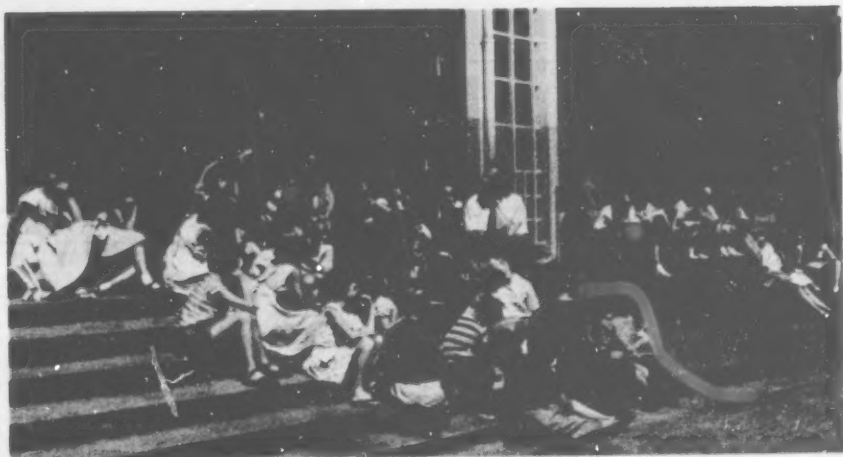
In all, approximately 64,500 children (or 53 per cent) of all 3- and 4-year-olds have some early education. Early childhood education has thus developed piecemeal, and it is clear that the next immediate need is for a comprehensive national policy for early childhood care and education which still allows for flexibility and diversity.

Primary education and language learning

Primary education, with instruction in English, is universal in New Zealand. Because of the country's geographical isolation and its emergence as a multi-cultural society, the steady decline in second-language learning has become a concern affecting many sectors of society.

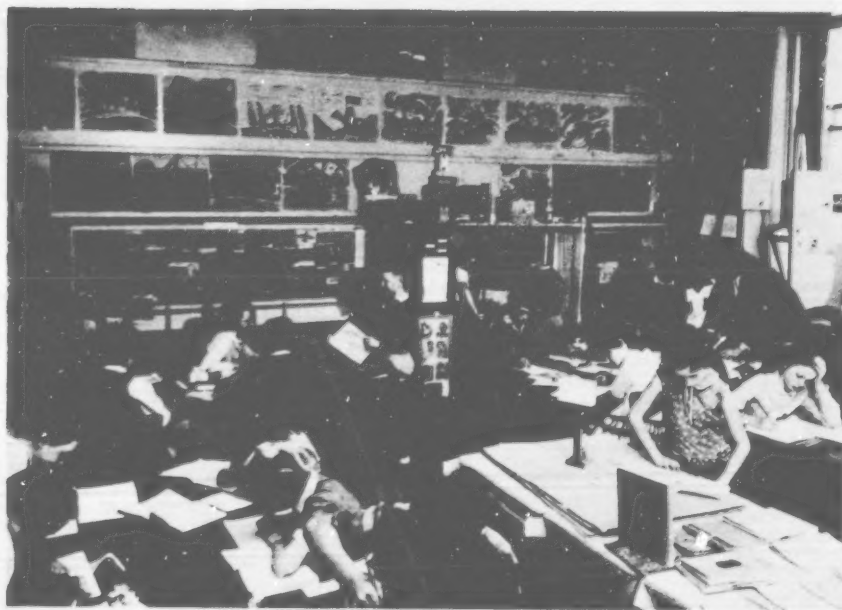
Several important events in the advance of language teaching have occurred and perhaps most significantly within the context of New Zealand as a multi-cultural nation (the evolution of New Zealand into a plural society is described under the discussion on multi-culturalism). A significant aspect of this development has been the considerable growth in awareness and appreciation of Maori language and culture in both primary

Education in countries of Asia and Oceania



and secondary schools. Growing emphasis is also being placed on the development of a learning interchange between Pacific Islanders and other New Zealanders. In 1976 the Pacific Islanders Resource Centre in Auckland became fully established. Classes in English and the various Pacific languages and cultures are being fully supported, and the centre faces a considerable demand for translation services by principals and others in Auckland.





A language reception centre has also been established. The centre provides second-language and educational programmes for recent migrant children from 7-to-11 years of age for whom English is a second language. Since 1976 under the auspices of the Department of Education, teachers, advisers, lecturers, and tutors have annually attended a one-year diploma course for teaching English as a second language. Graduates of the course are employed as resource personnel on their return to schools and colleges.

Secondary education

During the 1960s, growing dissatisfaction with secondary education was expressed by students, parents and teachers. The main criticisms were that schools were not providing courses that were seen as relevant by students, the School Certificate examination was an unrealistic goal as only approximately 50 per cent passed in each subject, and because of parental expectations and pressure, pupils of low ability pursued courses that were not adapted to their needs or achievement. Sixth-form courses had been dominated by the University Entrance examination, although only approximately one third of sixth-form students eventually take a university course. (Form VI = grade XII)

These growing criticisms impelled schools to change and led to a series of working parties and encouraged the Department of Education to

Education in countries of Asia and Oceania

institute a major review of secondary education in the early 1970s. In 1974, with additional resources, the review entered a new phase and involved all secondary school teachers in an examination of secondary schools, posing questions such as: What are we trying to do? Why are we doing this? What *should* we be trying to do? How are we as teachers or as school staffs trying to achieve these purposes? What are we in fact achieving? How can we improve what we are doing?

Twenty inspectors and teachers, trained to help with the review, organized a series of area meetings to which each State secondary school sent two or three representatives. At these meetings representatives were helped to plan their own school meetings. For two student-free days all teachers in each secondary school then reviewed their school and its achievements, on dates and in the manner of their own choice. Teachers participated with enthusiasm and expressed appreciation of the opportunity to become more professionally involved in wider issues. In most schools the staff prepared dossiers containing significant data about their schools. Many schools involved members of boards of governors and senior students in their discussions and a few involved their communities.

The area meetings were repeated following the school-review days and this time many private schools participated. These meetings were again successful as teachers shared experiences and reported on their individual school reviews, achievements and failures. Many schools have held a second series of school-review meetings and encouragingly, a great variation in approaches is evident. Post-review days are still in early stages and, in almost every school, small groups have been pursuing particular topics such as ways of introducing integrated studies, vertical-form organizations, methods of teaching about values and more valid assessment.

The results of the review are also evident in the establishment of a Committee on Secondary Education, to recommend desirable developments in secondary education and to suggest ways of ensuring close co-operation between schools and their parents and communities.

The secondary education review created a ferment that has given impetus to many developments in secondary education that were already underway or are now in progress. There are many interesting possible alternatives: examination courses; greater emphasis on social, emotional and aesthetic development of students; progress in refining and extending comprehensive guidance networks in schools; more emphasis on individualized programmes; community service and community liaison schemes; work exploration and work experience; and outdoor education. Many schools have made some progress in improving communication with parents and the community, and involving them in discussions and decisions

about school activities. The law has been changed so that considerable numbers of full- and part-time adult students may attend secondary schools. Schools are now seen clearly as one stage in a process of continuing education, preparing students with knowledge and attitudes for later learning at work, in higher education and in life.

Steps to lifelong education

The past ten years have seen a major shift of opinion about the nature of continuing education and about the degree to which it should be available. The generally accepted view had been that continuing education should provide (1) vocational education to meet the immediate needs of industry and (2) a variety of hobby classes in secondary schools in the evenings. Gaps in the provision of facilities for continuing education were considered to be adequately met by organizations like art societies and other activities. Following the discussions of the Educational Development Conference in 1973 and 1974, it was clear that provision for higher education is also required as well as 'second-chance' educational opportunities and refresher and advanced courses for particular occasions and groups.

In 1974 the Education Amendment Act (No. 2) was passed. Before this amendment, technical education has been defined as wholly vocational, and continuing education as all further education which was not wholly vocational. Continuing education is now defined in the amended Act as education, including vocational, for persons who have left secondary school and are no longer required to attend school. The definition excludes education provided in a university or a teachers' college.

The principal difference between the Educational Development Conference and the previous inquiries into education in New Zealand was the deliberate attempt to involve the layman. The major achievement of the conference was a consensus of trends, issues and developments in education which was reflected in the election manifesto and policy statements of the main political parties issued prior to the general election in November 1975. While the benefits were very real, however, the limitations were also recognizable. The well-educated, the articulate and those familiar with political processes were plainly heard; ethnic minorities and lower socio-economic groups did not participate as the government had wished.

In 1975, the Government established a Task Force on Social and Economic Planning to recommend improvements in economic and social planning in order to link them more effectively. On the recommendation of the Task Force, the Government has established the New Zealand Planning Council which is responsible to Parliament. The Council is required

Education in countries of Asia and Oceania

to "initiate processes of widespread consultation in order to formulate plans for the economic, social, cultural and environmental development of New Zealand."

In line with the objective of making continuing education more readily available, particularly outside major areas of population, community colleges are being established. Community colleges are seen as regional institutions serving a broad spectrum of needs and developing in diverse ways to meet the specific needs of the particular area they serve. The Wairarapa Community Action Programme (1975) and the Nelson Community Education Service (1976) are examples of these. Both organizations, one in the South Island and one in the North Island, are financed partly by the Department of Education and partly by local grants and donations. These organizations, which could be extended to other areas, employ professional staff who give advice and co-ordinate and extend, in co-operation with existing agencies, formal and informal community and educational learning services in the particular district.

The involvement of schools in continuing education is an important aspect of the New Zealand education scene. Government support continues to be provided to schools with extensive school-based community-education programmes. Many schools are already running extensive community education programmes within their normal staffing entitlement, and the national quota of over 2,800 non-vocational evening classes was filled in 1977. Most schools, whether primary, intermediate, or secondary, are used by their communities extensively, and systematic policies will be required to plan and provide a suitable basis for operation. In addition, as a result of the changes made in 1976 to the Education Act, pilot schemes, which were established in 1974 to enable persons who had left secondary school to re-enter the school system, have been extended and established permanently.

In May 1975, approval was given for the general concept of a bursary which would provide a living allowance for full-time students at universities, technical institutes, community colleges, senior technical divisions in secondary schools, and teachers' colleges. There is general acceptance, as a long term goal, of the introduction of a 'continuing-education bursary' as an educational entitlement which would be the right of all New Zealanders and would open to them the opportunity of a 'second-chance' education.

A major task of New Zealand technical institutes is to provide the education-based component of apprentice training. There has been a slow but steady growth in the number of apprenticeships. About 25 per cent of school leavers take up an apprenticeship of some kind.

Technical institutes, from their inception, have provided tuition for students studying towards certificates awarded by the Technicians' Certification Authority. There has been a steady increase in the range of certificates available—the original two have now increased to 20, and about 20,000 students are currently studying for these.

The first special Maori pre-apprenticeship scheme was instituted in 1959. Since then courses have been extended to five centres and in 1976, 320 trainees entered 19 courses in 12 different trades. These full-time courses at technical institutes last for one year or, in the case of carpentry, two years. While attending the course, students are paid by the Department of Maori Affairs, and those who successfully complete the course have their apprenticeship period substantially reduced.

In 1968, a Vocational Training Council was established and, since that time, 26 Industry Training Boards have been set up. The Executive Training Officers of these Boards identify industrial training needs, offer training advice to industry, explore avenues for training opportunities and, where appropriate, make available subsidies through the training incentive scheme.

Originally, the intent of vocational education was to provide facilities for part-time study for people already in employment. But the last decade has seen a steady growth of full-time students at technical institutes. At present, there are 4,620 full-time students in the technical institute system with the greatest influx taking place in 1973 when the transfer of nursing education from the hospitals to technical institutes began. New Zealand, because of the wide dispersal of its population, has also relied heavily on vocational teaching by correspondence. The number of people provided with vocational education by the New Zealand Technical Correspondence Institute has increased fourfold in the last ten years. At present the institute offers 900 different courses and has a roll of more than 20,000.

The role of higher education institutes in providing continuing education for a vocation has a vast importance in New Zealand, a country which does not at present provide specific training for a particular vocation in secondary schools. Particularly in the last ten years there has been a reaction against early specialization and while such subjects as technical drawing, woodworking, typing and metalworking are available, they are considered to be vehicles for teaching, and not a preparation for a career. However, there are indications that the trend towards non-specialization has ended and that the preparation of secondary pupils for the world of work is coming to be seen as an important part of the schools' task.

Multi-culturalism

In New Zealand, the first schools for Maoris were mission schools. The goal was conversion to Christianity, and Maori was the language of instruction. With the Native Schools Act in 1867, Maori was replaced by English and the goal remained clearly assimilative until the 1960s. Because of the rapid increase and faster growth rate of the Maori population and the accompanying urban migration, however, a new education policy was sought, as demographic forecasts indicate that in any planning process New Zealand must consider herself a plural society.

Since the early 1960s the policy of the Department of Education has been based on the principle, recently given more general expression in recommendations by the Task Force on Social and Economic Planning, that the needs of all sections of the community be met in the best possible way. This implies recognition of the different cultural values obtaining in New Zealand society and highlights the need for all children from all cultural backgrounds to have an equal opportunity to develop their talents.

This policy of a multi-cultural bias has already been coming into effect in educational planning over a number of years. In 1955, to obtain representation of the Maori viewpoint, the Education Department first involved Maori people in educational policy formulation by establishing the National Advisory Committee on Maori Education which meets annually. The Department of Education decided that in order to attain the goal of equal opportunity for Maori children, special measures must be applied particularly to the quality of teaching at all levels; and to ensure that curriculum and resource materials are suited to the needs of Maori children.

It was not until 1971 that a multi-cultural approach with implications for all children and teachers was expressed in a report of the National Advisory Committee on Maori Education. The report stated that the education system should ensure a growing understanding of Maori culture by all New Zealanders including the place given by Maoris to the Maori language so that the Maori child knows that his cultural differences are understood and respected by all he meets. Policies are now based on this view.

This report initiated a number of measures including research into educational and social problems facing Maori and Polynesian peoples; improved staffing of schools; developments in curriculum and in 1972, the development of teachers' college courses which prepare student teachers for the teaching of Maori children. Consequently, general courses in Maori studies and in-service courses have been established in teachers' colleges. In response to the growing demand for Maori to be taught in

schools, special texts have been published and courses held to train native speakers of Maori as teachers. Teachers' colleges and universities now provide for the growing demand for Maori language-teaching qualifications.

By 1974, educational provision for Pacific Island immigrants was one of the most important issues facing the education system. Following the recommendations of the Educational Development Conference and a conference on the education of Pacific Islanders in New Zealand, a Resource Centre was established in Auckland. The Centre is examining language needs and developing teaching materials to enable New Zealanders to appreciate Pacific Islanders' cultural background. Similarly, teachers and advisers are being trained in the special educational requirements of Pacific Islanders on arrival in New Zealand, enabling the Islanders to make their own contribution in schools.

Other means under consideration to achieve a multi-cultural bias in education and to ensure equal educational opportunity for all children include: recruiting more Maori and Polynesian teachers; training teachers to teach in multi-cultural classrooms; extending existing adult vocational and technical courses; improving existing guidance and counselling services; encouraging opportunities in continuing education; increasing the number of scholarships available to Pacific Islanders; extending the 'visiting teacher' service and staff training in areas with liaison problems between schools and homes; and extending Maori language teaching in primary schools.

There has been pronounced success in the education of Maori children and the egalitarian values of New Zealand society have provided the means for a positive policy. The major task that lies ahead is the education of all of the people to understand and welcome cultural pluralism.

Women in education and employment

During International Women's Year a number of conferences and committees discussed the question of women's rights. An outcome of the work of a Committee on Women and Education was the examination of education legislation to nullify the areas of discrimination on the basis of sex in selection and promotion in the teaching service. As a result, the regulations were amended to make sure that suitability would be the major criterion for selection for appointment. The only instances in which a preference for men or women is now ever stated are those in which there are sound professional reasons to support such a distinction. For example, men may be preferred in appointments to isolated places.

In addition, through the joint co-operative actions of vocational guidance officers and school guidance staff, women and girls are being

Education in countries of Asia and Oceania

encouraged to consider less-stereotyped educational and occupational choices. Intermediate schools are also encouraging girls to take traditional male courses such as metalworking and woodworking, and boys to join cooking and home economics classes.

At the adult level, two national courses have been held to examine the factors which are preventing women from progressing beyond the middle-management level in the education field. The most important outcome of the work of the Committee, however, is the increased recognition now being paid to the fact that on the grounds of both social justice and social need, it is essential that high priority be given to action on the status of women and the opportunities available to them. It is acknowledged that education is an essential pre-condition to many areas affecting the status of women, and it is the present Government's stated policy that, "All women must have the opportunity to participate on the basis of full equality in the social, economic and political spheres of New Zealand society." That policy proposes action in:

1. Early childhood education;
2. Vocational guidance and an emphasis on equal opportunity;
3. Training, retraining and 'second-chance' opportunities for women; and
4. Conditions affecting women teachers.

The Government and the Department of Education are aware not only of the administrative and selection procedures which may discriminate against women but also of the influences which can sustain stereotyped roles for both women and men, and limit their choices for life. To this end, the Minister of Education has issued a statement recognizing that controlling authorities must examine appointment and promotion procedures; teachers must examine school organization, teaching methods and curriculum content; teachers' organizations must examine conditions of service; local groups and organizations must examine the ways they operate and the people they involve. To make the necessary alterations, change is required in the attitudes of both men and women, and such changes cannot be forced upon society. Both the Government and the Department of Education are committed to taking action toward changes in education which will move New Zealand society to greater equality.

Health and social education

The Committee's terms of reference were to identify the conditions under which health, growth and development may be fostered in primary and secondary schools and to make recommendations on the studies and

activities that should constitute school programmes, organizations and relationships. The report of the Committee 'Growing, Sharing and Learning,' commonly referred to as the Johnson Report, was presented to the Minister of Education in late 1977.

The report puts into context the wide range of issues set out in the Committee's brief, and focuses on the roles of the community, parents and schools. Special emphasis is placed on six major themes: the importance of ensuring well balanced, all-round development of children; greater involvement of parents and of community with schools; the important influence of the climate of human relationships in schools; expanded teacher education; the need for more physical and human resources, and the greater availability of support services. It also comments on the nature of teaching and on the possible content of programmes, and attention is drawn to moral and value objectives within other subjects, particularly social studies, where objectives and resources for teaching have been built up over the past decade.



Rural education

The Department of Education encourages consolidation of rural schools to enable country children to enjoy improved educational facilities. Previously, most rural children were catered for by district high schools which were primary schools with a secondary department to which neighbouring primary schools contributed. However, most district high schools have now been reorganized into seven-year schools (grades VII to XIII). Thirteen districts have been identified as suitable for implementing these steps. In each district most of the following resources will be introduced:

Pre-school staffing. Itinerant pre-school teachers or pre-school community workers will be provided to support pre-school groups in the more remote parts of districts where the numbers of pre-school children are too small to justify the establishment of traditional units.

Guidance/visiting teachers. These teachers will work to provide guidance and visiting teacher services where families are at a disadvantage or at risk through such factors as frequent changes of school, family tensions and limited employment opportunities.

Liaison between schools. A time allowance will be given to schools to provide liaison between primary and secondary schools, and between secondary schools and continuing education services, so that programmes within a district are co-ordinated and the transition between the above institutions is eased. Attention will be given to the development of remedial programmes in basic subjects.

Seconded teachers/advisers. Teachers with particular skills and expertise will be seconded to assist teachers in rural primary and secondary schools to strengthen teaching where a weakness has been identified.

Continuing education organizers. Such organizers will be placed to plan and co-ordinate adult education programmes.

Additional staffing in rural secondary schools. An authority will be given for additional teachers to be allocated on an annual discretionary basis. These teachers will be used to establish senior classes in specialist subjects which could not be otherwise staffed within existing staffing entitlements. A number of additional measures have recently been taken. These measures include increasing the school boarding bursary, helping children travelling from remote areas with transport costs, assisting with removal costs of parents of severely handicapped children who move to areas where appropriate special education is available.

This effort in favour of rural communities is made to ensure equal educational opportunities, and in the belief that the quality of education

in rural districts can contribute to the confidence of the agricultural sector which is of great importance to any nation's economy.

Broadcasting and communication

Under the 'Broadcasts to Schools' scheme, one hour is provided each day for the transmission of radio programmes to schools. At the present time, programmes are developed by Radio New Zealand to general specifications provided by the Department of Education where the financial authority for the programmes rests. The programmes produced and their accompanying brochures have had wide public appeal and stimulated discussion on the varied programme topics. The series was designed as a starting point for further explanation, demonstration and discussion of early reading. To this end, listening groups of parents were formed by advisers to schools, parent-teacher association committees, and pre-school and adult education groups.

A recent innovation within the Department of Education has been the allocation of funds for the making of films in New Zealand which are considered to be of special importance to education. Films covering new curriculum changes and topics of special interest to parents, as well as a range of curriculum subject material, have been commissioned from the National Film Unit and from independent film-making companies.

The Department of Education is currently taking part in negotiations to form an advisory group on educational broadcasting and television in steps towards producing more educational programmes through both media.

Continuing education for teachers

Much recognition is paid in New Zealand to the need to provide in-service training opportunities for teachers to enable them to keep abreast of trends in education and society and to improve their capabilities as teachers. A recent development has been the establishment in 1977, by the Department of Education, of three pilot non-residential teachers' centres in Auckland, New Plymouth and Alexandra. The centres were set up on a two-year trial basis with the hope they would become models to illustrate how a variety of types of teachers' centres could serve the needs of widely different communities. Thus the Auckland centre has been set in a large metropolitan area, the New Plymouth centre in a provincial city and the Alexandra centre in a country area.

Each centre has a range of audio-visual equipment and an allocation of finance to enable it to develop in-service programmes, continuing education courses and resource materials and facilities for teachers' use.

Education in countries of Asia and Oceania

Evaluations of these centres will provide a basis for providing the most appropriate facilities in other localities throughout the country.

The Advanced-Studies-for-Teachers unit within the New Zealand Correspondence School is also in the process of expanding its courses to meet an urgent need to provide teachers with suitable correspondence courses to enable them to improve their qualifications and teaching techniques. In 1977, the number of subject enrolments for the 1978 academic year was 1,640. Courses with the highest enrolment were Reading and the new courses—Literature for young people, Librarianship, Early childhood education, and Home economics. More than a dozen new courses are in various stages of preparation, and course production and revision are likely to be a major task for several years to come. The unit works closely with the teachers' colleges, which handle, on a trial basis, some of the tutoring as part of their involvement in the further education of teachers.

Advances in continuing education for teachers are also taking place within the universities. Teachers can complete a Bachelor of Education degree through correspondence courses and short on-campus sessions.

Several other important innovations of a more particular nature have also occurred in continuing education for teachers. Of notable importance is an in-service programme developed in Auckland which deals with the teaching of reading in the early school years. The programme, which uses a series of slides, audio tapes, and work booklets, is taken by individual teachers over a period of 12 weeks. It introduces them, at a rate to suit themselves, to the latest ideas and research in the teaching of reading, offers them methods for developing a class programme, of teaching methods, and requires the teachers to apply these in their own classrooms.

Meanwhile, a major review of teacher education is being undertaken in New Zealand. The Educational Development Conference studied various criticisms of the pre-service training of teachers and recommended that a comprehensive review be undertaken of all aspects of the pre-service preparation of teachers. On suggestion from interested groups, it was decided that the review should take the form of a conference, followed by working parties, which would investigate issues identified at the conference. The main issues identified were: recruitment, selection, flexibility of training programmes, qualification of teachers, evaluation of the effectiveness of training, and induction into the teaching service. A working party, broadly reflecting the major interests represented at the conference, was then established to study these major issues, and a second conference held in 1978 which formulated suitable guidelines for the future.

PAKISTAN

Introduction

Pakistan's Constitution of 1973 recognizes the importance of education, seeing it as the most effective and powerful instrument of social change. Under this Constitution, the following are some of the responsibilities of the Federal Government:

1. Libraries, museums and similar institutions controlled or financed by the federation.
2. Federal agencies and institutes for research for professional or technical training or for the promotion of special studies.
3. Education in respect of Pakistani students in foreign countries and foreign students in Pakistan.
4. Copyright, inventions, designs, trademarks and merchandise marks.
5. Corporations such as the Printing Corporation of Pakistan and the National Book Foundation.
6. National Planning in the field of education and national economic co-ordination including planning and co-ordination of scientific and technological research.
7. Mental illness and mental retardation.
8. Curricula, syllabuses, planning, policy, centres of excellence and standards of education.
9. Islamic education.
10. Inquiries and statistics for the purpose of any of the matters in this list.

Organization of the educational system

The Federal Ministry of Education which has now assumed greater responsibility in the field of education, has expanded in size and stature. It is headed by a Minister/Adviser and the executive authority is vested in the Secretary who ensure implementation of policies in close collaboration with the Provincial Education Departments. The Ministry consists of the following five wings entrusted with specialized jobs: (1) Administration, (2) Institutions, (3) Planning, (4) Curriculum, and (5) Research. Each wing is headed by a Joint Secretary/Joint Educational Adviser.

Education in countries of Asia and Oceania

The job of administration and management of the educational institutions at both the school and 'college' levels is the sole responsibility of the Provincial Education Departments. Every Province has a Minister/Adviser who is assisted by the Provincial Education Secretary. The organization and functions of the Provincial Education Departments include: administration, planning, and curriculum development—including teacher training.

To maintain effective control and supervision over the working of the educational institutions, there are Directors of Education appointed at the Provincial/Divisional level as well as District/Assistant Education Officers at the District and *Tehsil* levels.

The Ministry of Education does not work in isolation in evolving the overall Education Policy of the country. An effective liaison is maintained with the other relevant ministries, particularly with the Planning Division of the Ministry of Finance so that educational plans may be suitably incorporated in the overall perspective of national planning and development. Similarly, collaboration is maintained with the Economic Affairs Division, which negotiates technical assistance with different countries, international organizations in the field of education, and bilateral and multi-lateral cultural co-operation programmes.

The co-ordinating agency for the formulation of national development plans is the Planning Division. There are separate sections for Education, Manpower, Agriculture, Communication and others where major development plans prepared by different Ministries are critically evaluated and processed. This ensures an integrated development effort.

Structure of education

There are three tiers of education, namely the primary stage, grades I to V, the secondary and higher-secondary stages, grades VI to XII, and higher education, grades XIII to XVI. Master's Degrees both in humanities and sciences are awarded by universities in different fields of discipline. Each university offers Ph.D. Courses to research students after the completion of their Master's Degree.

Students aged from 5 to 9 years are enrolled in primary schools. The Boards of Intermediate and Secondary Education conduct the terminal Secondary-School Certificate Examination at the end of ten years of schooling and the Higher Secondary School Certificate Examination at the end of the 12 years of education. Students who complete just two years of higher education appear for the Bachelor's Degree in Humanities, Commerce and Science in the examinations conducted by the different universities.

There are separate Agriculture, Medical and Polytechnical colleges and Engineering universities which offer professional courses in Agriculture, Technical Education, Medicine and other specialized disciplines. In addition, there are a number of vocational and commercial institutes which award diplomas to the students of different trades and vocations.

Expenditure on education

The total expenditure on education has increased from 789.9 million rupees in 1970-71 to 3,300 million rupees in 1977-78, showing a 418 per cent increase of 2,510 million rupees.* In 1970-71, an amount of 309.5 million rupees was spent on development projects and 480.4 million rupees on recurrent items. In 1977-78, 855 million rupees were spent on development and 2,445.7 million rupees were spent on recurring items. This indicates an increase of 176.6 per cent on development expenditure during the last seven years, and an increase of 409 per cent on recurring expenditure.

The major portion of expenditure on education is incurred by the provinces which manage the majority of the educational institutions in the country. As interest in education is growing at the Federal level, however, the Federal allotment for education is on the increase. In view of the increasing importance of education, the expenditure on education as percentage of the Gross National Product (GNP) rose from 1.7 per cent to 2.1 per cent.

Primary schools

Enrolment figures for all levels of education are given in the table on page 171. The total enrolment at the primary stage has grown from 4.2 million in 1971-72 to 5.9 million in 1977-78. In terms of the age group, it has risen from 43 per cent to 53 per cent, nearly 70 per cent in the case of boys and 32 per cent in the case of girls. These percentages are national averages and, in the case of rural areas and deprived population groups, the enrolment percentages are much lower. The drop-out rate between grades I and V is estimated to be nearly 59 per cent.

The number of primary schools has risen from 45,854 to 59,278, showing an increase of 13,424. The number of teachers at the primary stage has also increased by nearly 40,000. There have tended to be one-teacher schools in the rural areas, but during recent years, steps have been taken to provide two teachers for every primary school, particularly in the

* 9.90 rupees = one US dollar

Education in countries of Asia and Oceania

rural areas, so that if a teacher is absent, the school remains in operation. In addition to this, detailed exercises on proper school mapping, reducing the cost of school building, stronger teacher training programmes, provision of better teaching aids and higher financial allocations are being undertaken to increase enrolment and reduce drop-outs at the primary state.

The following steps which have been taken reflect the interest of the Government in primary education:

1. Rationalization of resources for primary education, increasing the budget from 13 per cent to about 26 per cent of the total allocation for education.

2. Research and survey for identification of resources of people and material available within the community for purposes of supporting primary education and making its content meaningful to the community, thereby involving community participation.

3. Reduction of the cost of primary school buildings, from 100 rupees to 44 rupees per square foot.

4. Allocation of substantial funds for the improvement of the quality of education at the primary level by making provision for educational materials and improved programmes of teacher training and retraining.

5. Provision of incentives to primary school teachers in rural areas by giving female teachers residential accommodation as far as possible.

6. Greater emphasis on primary school mapping so that schools are located within walking distance of children and are neither overcrowded nor under-utilized.

Middle schools

Enrolment at the middle stage (grades VI to VIII) has risen from 0.96 million to 1.5 million in 1977-78, showing an increase of 0.54 million. The percentage enrolment of children of the age group 10-12 years has increased from 27.5 to 37.14 per cent. These are national averages. Only 9 per cent of the girls of the relevant age group are estimated to be enrolled at the middle stage as compared to nearly 32 per cent of girls of the relevant age-group enrolled at the primary stage. Social conventions, among other factors, are partly responsible for the low enrolment of girls. Once again, these are national averages; enrolments in the rural areas are likely to be much lower than those in urban areas.

To provide places for the increased flow of students from the primary stage, 1,437 new schools were provided during the period under

PAKISTAN: Enrolment by level of education, 1972-73, 1977-78

Level/Grades	1972-73			1977-78*		
	Total	Male	Female	Total	Male	Female
Primary (I-V) (Millions)	4.46	3.19	1.27	5.93	4.01	1.92
Middle (VI-VII) (Millions)	1.04	.81	.23	1.75	1.29	.46
Secondary/High (XI-X) (Thousands)	390	309	81	642	508	134
Higher Secondary (XI-XII) (Thousands)	136.7	104.3	32.4	161.4	119.8	41.6
Secondary Vocational (Thousands)	58.7	42.2	16.5	50.9	33.4	17.5
Degree (XIII-XIV) (Thousands)	57.5	41.8	15.6	64.8	42.9	21.9
Professional Colleges (Thousands)	37.6	32.1	5.5	50.3	41.9	8.4
Post-Graduate (including M. Ph. and Ph. D.) (Thousands)	9.1	6.5	2.6	12.9	9.8	3.2

* Estimated

review. In order to improve the quality of teaching, 14,000 additional teachers were also provided.

Secondary schools

During the period 1971-72 to 1977-78, the enrolment in grades IX and X grew from 0.365 million to 0.642 million showing an increase of 0.277 million. Eighteen per cent of the children of the age-group are now enrolled as compared to 16 per cent of the age group enrolled six years ago. To accommodate the increased flow of students from the primary and middle classes, nearly 1,500 new schools were opened; to improve the quality of teaching, nearly 20,000 additional teachers were provided in the secondary schools.

Additional physical facilities in the form of better buildings, teaching equipment and laboratories were provided, for which enhanced financial allocations were made. New curricula were introduced in 1976 with an integrated science course and a compulsory vocational component.



Agro-technical and technical education

One of the major reforms in education according to the policy announced in 1972 was the designing of curricula relevant to the nation's changing social, economic and political needs. This has resulted in a massive shift from aimless general education to more meaningful agro-technical education. Another objective was to ensure the feasibility of both the structure and content of education through the integration of general and technical education, keeping options open for pupils to transfer from one course to another.

In order to meet these objectives, new curricula for primary, middle and secondary stages have been prepared and implemented in grades I to XI. New curricula in agro-technical education for grades VI to VIII and curricula in vocational subjects for grades IX and X have also been introduced. Agro-technical subjects in grades VI to X have been introduced in 2,406 schools. Of these, 1,000 middle schools and 200 secondary schools are being equipped by the Federal Government at a cost of 30 million rupees.

In order to train the right type of teachers for the effective implementation of this innovative programme, a comprehensive scheme has been launched by the Federal Government for the establishment of six Agro-Technical Teacher Training Centres in the Punjab, North-West Frontier Province, Sind, Baluchistan, Azad Kashmir, and Islamabad. Financial assistance is being made available to the provinces for making arrangements for the training programmes.

The Federal Government has launched an innovative programme to revolutionize technical education in the country by tailoring it to the needs of the industrial projects in the various regions. Fourteen Trade Schools are being established to train literate craftsmen.

Higher education

In grades XI-XII (Intermediate stage) enrolments increased by 52,000 between 1971 and 1978. The number of Intermediate Colleges increased from 140 in 1971 to 195 in 1978. The participation of girls is only 24 per cent of the total enrolment and is mainly confined to urban areas.

The enrolments at degree level (including Professional Colleges) rose from 46,000 in 1971 to 65,000 in 1978. This includes enrolments in the Degree Colleges, as well as the enrolment in grades XIII and XIV in the Universities. The enrolments in professional colleges increased from 37,590 in 1972 to 50,270 in 1978. Of these, only 10,910 are enrolled in Agriculture and Engineering.

In higher technical education, graduate engineers are being trained in six engineering colleges or universities. In addition, facilities for the training of graduate engineers exist at the Institute of Chemical Engineering Technology at the University of the Punjab, Institute of Textile Technology, Faisalabad and Tando Jam. For the training of marine engineers, there is a Marine Academy at Karachi under the Federal Ministry of Communication.

The Allama Iqbal Open University was established in Islamabad in 1973, the Gomal University in Khan in 1974, Multan University in 1974, and Bahawalpur University in Bahawalpur in 1975. The Agriculture College at Tando Jam, the Engineering Colleges at Karachi and Nawabshah have been raised to University status. Similarly the degree college, Khairpur (Sind) is now the Second Campus of Sind University.

University Grants Commission. In order to co-ordinate the programme of the universities for greater national development and to ensure an easy flow of public funds for this purpose, an independent autonomous corporate body was needed. The Government therefore decided to establish a University Grants Commission to serve as a buffer between the Government and Universities. Accordingly, the Commission was established in July 1973. The Commission has prepared an elaborate programme for the development of the universities and the improvement of higher education in the country.

Centres of excellence. In order to minimize the country's reliance on other nations, and to produce top-level expertise, Centres of Advanced Study in specialized fields have been established in different universities by the Federal Government. Intellectual resources of the country have been pooled to run these centres which are to engage themselves in goal-oriented, high-level teaching and research and produce trained manpower.

Education in countries of Asia and Oceania

The following Centres of Excellence have been established: (1) Marine Biology at University of Karachi; (2) Analytical Chemistry at University of Sind; (3) Solid State Physics at University of the Punjab; (4) Mineralogy at University of Baluchistan; and (5) Geology at University of Peshawar.

Area Study Centres. In order to promote the detailed study of various contemporary societies, particularly those of special interest to Pakistan, Area Study Centres for research and advanced study have been established in various universities of the country as follows:

1. South Asian Studies at the University of the Punjab
2. European Studies at the University of Karachi
3. Central Asian Studies at the University of Peshawar
4. Far-East/South-East Studies at the University of Sind
5. Africa and North and South America at the University of Islamabad (Quaid-e-Azam University)
6. Middle East and Arab countries at the University of Baluchistan.

Pakistan Studies Centres. For greater national cohesion and integration, it is of paramount importance that people of one region of the country understand the language and literature, social structure and customs of the people of other regions of the country. To achieve this objective, five centres at the Universities of the Punjab, Sind, Peshawar, Karachi and Baluchistan have been established for research and post-graduate studies of the language, literature and culture of the people of Pakistan. A National Institute of Pakistan Studies has been established at the Quaid-e-Azam University at Islamabad.

National Academy of Higher Education. In order to meet the urgent need for the training of college and university teachers and to improve the quality of education, a National Academy of Higher Education under the administrative control of the University Grants Commission has been established. The primary function of the Academy is to undertake the training of the practising teachers both in methodology and content. It will also provide initial training to the newly recruited teachers in methods and techniques.

Curricular reforms

The curricula were to be revised and designed in accordance with the nation's changed social and economic needs and made compatible with the national ideology. In accordance with the policy objectives, the National Bureau of Curriculum and Textbooks of the Ministry of Education finalized the goals and aims of education, emphasizing: (1) National

ideology; (2) National cohesion; (3) Dignity of labour; (4) Productive skills/work; (5) Community development projects; and (6) Development of learners' appreciation for and attitude towards life in a just society. The schemes of studies for various levels of education were developed in the light of the goals of education, clearly defined by a National Committee consisting of educationists, parents and citizens.

The new curricula are being fully implemented, with the exception of the vocational component owing to resource constraints, in the scheme of studies of grades VI through X. In the first phase, equipment for implementing the vocational component has been provided by the Federal Government to 1,000 middle schools and 200 high schools. In addition to this, the Provincial Governments have provided equipment and teachers to a number of schools from their own resources. The total number of middle and high schools in the country where vocational subjects have been introduced comes to about 2,500.

Two national seminars, one of them for suggesting schemes providing Guidance Counselling Services for students at all stages of education, and the other for the implementation of the examination reforms envisaged in the Education Policy (1972-80) were organized by the Ministry of Education. Diagnostic research studies on causes and remedies for failure and indiscipline in public examinations have been undertaken through the Boards, Universities and the University Grants Commission.

Teacher education

With the revision of the curricula for primary, middle and secondary stages, the need for providing sound, basic education and professional training to teachers had also become acute. A comprehensive project has been launched to modernize the teacher education curricula for all stages. As a first step, the National Committee has revised the teacher education curriculum for elementary stages. The B.Ed. curriculum has also been revised through the National Committees.

The Federal Government through its National Institute of Teacher Education is providing training for master trainers of various subjects. In order to provide in-service teacher education facilities, the Institute has completed five courses for master trainers.

Textbook production and teaching kits

With the revision of curricula, the production and distribution of new textbooks becomes essential. The manuscripts prepared by the Provincial Textbook Boards in accordance with the requirements of the

Education in countries of Asia and Oceania

curricula were reviewed at the national level under the supervision of the National Bureau of Curriculum and Textbooks through National Textbook Review Committees for various subjects.

The introduction of a new curriculum tends to be a major problem in developing countries, owing partly to resource constraints in providing new materials and training programmes, and partly to resistance to change. In order to give necessary legal support to curriculum change, the Federal Government has introduced new legislation for Federal Supervision of Curricula, Textbooks and Standards of Education.

Teaching kits have been developed for primary schools. The Federal Government provided teaching kits to 15,000 primary schools in the country during the first year. The kits are to be provided to all the primary schools in a phased manner.

Educational planning

During recent years, the need for sound educational planning has emerged as a pre-requisite for proper expansion and improvement of education and relating it to the development goals of the country. The function of educational planning has therefore been institutionalized by the creation of a Bureau of Educational Planning and Management at the Federal level. The Bureau undertakes planning, research, experimentation and training for personnel throughout the country. The major functions of the Bureau are: (1) planning of education of all levels; (2) fixation of priorities and physical targets; (3) preparation of Annual Development Programmes; (4) studies and surveys; (5) development of programmes of educational innovation; (6) standardization of unit costs; (7) undertaking perspective planning; and (8) training.

There is an awareness that centralized planning without the active involvement of the implementing agencies can lead to a number of distortions in the implementation of educational plans. Planning has therefore been localized by establishing planning units at the Provincial level through which it is intended that, as far as possible, the task of planning and management filters down to the grass-roots level.

Adult education

Pakistan has one of the highest illiteracy rates in the world. According to the 1972 census, of a population of 42.4 million of 10 years of age and above, 31.1 million were illiterate. Illiterates formed 73.3 per cent of the population in 1972. The 1972 census showed the percentages of illiterates in case of the rural males and females to be 80.8 per cent and 94 per cent respectively.



While there is a clear trend of increase in participation rates in primary, secondary and post-secondary education, there does not seem to be a significant improvement in the percentage of literacy in the case of adults aged 25 years-and-above, and there is now a decline in the literacy rate for the population of 10 years-and-above in the country. As a result, the eradication of illiteracy is seen as a major means of enhancing the productivity of individuals and is being given a high priority.

Presently, Adult Education is the direct responsibility of the Provincial Governments. There are a number of organizations in the provinces and at the federal level, both Governmental and voluntary, working on this problem. Some of the organizations are: (1) The Provincial Education Departments; (2) The Provincial Local Governments and Social Welfare Departments; (3) The People's Works Programme; (4) The Rural Development Ministries/Departments; (5) Educational Television; (6) The Allama Iqbal Open University; (7) The Adult Basic Education Society; (8) The All-Pakistan Women's Association; and (9) The Girl Guides Association.

Although most people are taught to read the Holy Quran, they cannot read and write in their mother tongue. Along with primary education, functional continuing education for adults is receiving increased attention. Greater financial allocations are being made and the programmes of

Education in countries of Asia and Oceania

various organizations are being strengthened. In previous years the main emphasis was on literacy alone. There is an emerging trend to tailor adult education programmes to survival and production needs of the community. Skill training is receiving higher priority and literacy materials are being developed around various skills being taught to adults. This in turn enhances motivation. Moreover, Adult Education Programmes are being integrated with the work of other developmental agencies operating in the rural areas, and the active involvement of the people in planning and implementation of these programmes is being progressively achieved.

Problems and issues

The most important problem of education is the availability of resources and their rational distribution in various sub-sectors of the system. Although expenditure on education has increased more than four times, the ever-increasing numbers, the rising costs and other factors have tended to neutralize the added financial resources being put into education. A sizeable chunk of the increased expenditure was taken away due to the nationalization of institutions and increases in salaries of teachers. We have seen that the expenditure on education is only about 2.1 per cent of the Gross National Product. This is a very low investment as compared to that being done by other developing countries of the world, where it ranges from 2.3 per cent to 4 per cent—let alone the developed countries.

Another problem is that of the relative priorities in various sub-sectors of education for purposes of financial allocations. During the period under review, the share of primary education, which alone attempts to reach the general mass of the population, was only about 13.2 per cent of the total development resources as against 16.2 per cent for secondary education and 34.7 per cent for higher education (which includes general and professional education). In addition to this the share of higher education was further enhanced because nearly 75 per cent of the expenditure on scholarships, stipends and the like benefits students in institutions of higher learning.

On the basis of expenditure levels at various stages of education, it is estimated that the cost of educating 140 primary school children is the same as the cost incurred on one university student. This disparity in the costs at various levels has to be rationalized: the priorities between primary, secondary and higher education have to be determined and their relative weightage decided.

The problem of centralized planning with very little involvement of the people at the field-operational level and the masses of the population

needs special consideration. If the involvement of the people is ensured in the planning process, the benefit of utilization of hidden resources of the community can provide support to proper planning, implementation, evaluation, modification and renewal of educational programmes.

The low participation rates, the high drop-out rates—estimated at about 60 per cent of primary school enrolment—the inability of secondary school graduates and technical graduates to get employment or be self-employed, necessitates some serious thinking on the question of the efficiency of the educational system. In the case of primary schools, nearly 60 per cent of the schools do not have accommodation which may meet the barest minimum requirements of a school. A number of schools function in the open air, exposing children to the vagaries of weather. Teachers, particularly females, are in short supply in rural areas. The absence of teachers is a chronic feature with the result that a number of schools in the rural areas exist only on official records.

In spite of low enrolments and very few drop-outs at the secondary level, the majority of the school leavers do not possess any skills which may help them to be gainfully employed in the community. Even worse, at the university level, although the enrolment is low both in absolute terms and as proportion of the corresponding age group, young men and women who come out with degrees are unable to get employment.

The distribution of students enrolled in various streams at the second and third levels is uneven. In secondary schools, 74 per cent are enrolled in arts. At the post-graduate level a higher proportion is enrolled in professional courses, mainly law and education.

In the field of technical education the greatest problem is lack of correspondence between training programmes and requirements of available job opportunity resulting in surplus manpower in some cases and shortage in others.

The failure rates at the school-certificate level and the degree level are high. At the school-certificate level, the rate is estimated at about 45 per cent and at the degree level at about 70-75 per cent.

The problems of management are both complex and many. Basically, the traditional management structures cannot cope with the new demands of management in the country. The centralized decision-making leads to inordinate delays and a number of distortions in the implementation of programmes. Models of participatory management with decentralized decision-making need to be evolved. Moreover, the cost of management, which is estimated at 3 per cent of the total expenditure on education, needs readjustment, particularly at the school level.

Education in countries of Asia and Oceania

The problem of planning has two major aspects:

a) The problem of co-ordinated and integrated planning, taking into consideration the potential needs and requirements of various agencies involved.

b) The problem of involving the participation of various individuals, institutions and agencies who are the agents and beneficiaries of various development programmes in the field of education.

The mismatch of educational outputs with the inputs in other projects is a major problem. For example, the output of Engineering graduates without a parallel expansion in industry and other development projects can lead to a surplus of technically trained manpower which, instead of being utilized for development purposes, becomes a political force, which impedes national development and growth. A more integrated and co-ordinated approach to planning, therefore, appears to be essential.

International collaboration

With increased emphasis on developing plans, strategies and models, which have roots in the cultural and socio-economic fabric of society with the objective of increasing self-reliance and relating education to life, Pakistan's interest in methods of international collaboration are undergoing considerable change.

There is growing awareness that experts from developed countries find it extremely difficult to understand Pakistan's priorities, national problems, goals and directions for growth. Many of the plans prepared by these experts pre-suppose changes in other socio-economic programmes and the imposition of foreign models. This leads to a number of distortions during the course of implementation, the result of which is that the major objectives of the programmes are lost sight of.

In the field of international collaboration with the emphasis shifting towards self-reliance, the exchange of information and experiences in developing countries with similar conditions and a commonality of outlook towards development will automatically increase. This would start a two-way traffic in a relationship in which both parties give and receive.

The Pakistan Government gives whole-hearted support to the Unesco-supported Asian Programme of Educational Innovation for Development (APEID) in which technical co-operation is seen as a process of mutual learning in a relationship of equals. Pakistan has been an active participant in the programme and feels that, since this mode of technical co-operation is one which suits the country's conditions and fulfils its objectives, funds of various international agencies should be diverted to support the activities of this Programme.

Conclusion

It will be seen that increased emphasis is being given to providing access to basic education, rationalization of financial allocations to various sub-sectors of education, relating education to socio-economic conditions prevailing in the country, making educational planning and development participatory in nature in which the recipients are actively involved in designing and implementing programmes, utilizing community resources for supporting and strengthening educational programmes, integrating and co-ordinating efforts of all developmental agencies which touch the lives of people for making collaborative developmental efforts, and making education open-ended and purposeful so that learners can benefit from it in terms of their needs in a manner that suits their learning styles, at a time and place convenient both to the learners and the teachers. More and stronger links are being established between countries of the region with the object of exchanging experiences and pooling wisdom to give support to educational programmes geared to developmental goals but related to widely varying local conditions.



PAPUA NEW GUINEA

Background

Papua New Guinea has adopted a political system based on the British model. For the first two years following independence, the government was centralized and operated only through a national parliament. Prior to 1977 and to the national election of the first Government elected by an independent Papua New Guinea population, a move was made towards decentralization.

In January 1977, the National Parliament passed the Organic Law on Provincial Government, providing for the provinces (formerly known as districts) to take over specified functions as and when each was ready. The functions allocated included planning and managing the basic government services of education, health, agricultural extension and business development. The Organic Law provided for the transfer of these national functions to the provinces and guaranteed the unconditional financing of provincial governments in future years, to the extent of national government expenditures on those functions in the 1976/77 financial year. In effect, the national government has transferred 20 per cent of its annual budget to the provinces. In addition to this unconditional grant, the National Government provides conditional grants to the less-developed provinces to assist with equalization.

The economy

The economy of Papua New Guinea is sharply divided between traditional subsistence production, which supplies the basic needs of the bulk of the population, and a modern cash economy which provides the potential for gradually broadening the range of goods and services available to the population. Subsistence production is hard-pressed to keep pace with the rapidly growing population which was estimated in 1977 at 2.9 million. Although the Government has made considerable advances in stimulating the indigenous population to move into the modern sector of the economy, this sector is still dominated by the expatriate population (which numbers 36,000).

The prosperity and growth potential of the modern sector is highly vulnerable to fluctuations in the world economy. The exports of Papua

New Guinea consist mainly of copper concentrates (more than 50%), coffee, cocoa, and copra and copra products. The prices of all these commodities fluctuate widely in world markets. Apart from one major copper-mining project, economic growth has been determined largely by the growth in government activities, which is also dependent upon external factors. Increasing government expenditure has been required to make up for Papua New Guinea's late start in the development of a modern infrastructure and services. This remains a major task.

Economic development has been extremely uneven in the provinces. Improvement in services is hampered by the inaccessibility of many parts of the country and the difficult local terrain which is either mountainous or swamp. Apart from the single major road link from the port of Lae through the spine of the central highlands, inter-provincial traffic is still heavily dependent on expensive air services and coastal shipping routes.

The value of the *kina* (local currency) against international currencies has been maintained since its introduction in 1975.* Growth of internal revenue has been accelerated by increasing levies on imports and locally-produced luxuries. The proportion of Government revenue internally generated has risen from 33 per cent in 1971 to 50 per cent in 1976.

National Development Strategy

The Government's National Development Strategy concentrates on rural development, partly by attempting to improve public services in rural areas and to equalize their distribution around the country, but mainly by providing income-earning opportunities through which the people can provide for more of their needs through their own efforts. The following are the eight aims of the Government:

1. A rapid increase in the proportion of the economy under the control of Papua-New-Guinean individuals and groups and an increase in the proportion of personal and property income that goes to Papua New Guineans;
2. More equal distribution of economic benefits, including movement toward equalization of incomes among people and toward equalization of services among different areas of the country;
3. Decentralization of economic activity, planning and government spending, with emphasis on agricultural development, village industry, better internal trade, and more spending channelled to local and area bodies;

* 0.69 kina = one US dollar.

Education in countries of Asia and Oceania

4. An emphasis on small-scale artisanry, service and business activity, relying where possible on typically Papua New Guinean forms of business activity;
5. A more self-reliant economy, less dependent for its needs on imported goods and services and better able to meet the needs of its people through local production;
6. An increasing capacity for meeting government spending needs from locally raised revenue;
7. A rapid increase in the equal and active participation of women in all forms of economic and social activity;
8. Government control and involvement in those sectors of the economy where control is necessary to achieve the kind of development desired.

The National Public Expenditure Plan

This Plan is a tool for making government policy effective. The style of development outlined above can only be achieved if government spending is redirected towards a more equal distribution of the fruits of development. The National Public Expenditure Plan makes it possible for all growth in spending to be critically examined to ensure that it is in line with government policy. This critical examination will be gradually extended to cover spending on existing activities, many of which represent the policies of previous administrations and are therefore not likely to be fully consistent with the development objectives formulated since self-government and independence.

The machinery established to develop and implement an expenditure plan to operationalize national objectives is as important as the goals themselves. In Papua New Guinea, departmental proposals are co-ordinated by the National Planning Office (a branch of the Prime Minister's Department) then presented for selection and review, in turn, by the Budget Priorities Committee (heads of major departments with responsibility for monitoring development resources, staff, finance, planning and aid), the National Planning Committee (political leaders of the National Executive Council), the National Executive Council (the Cabinet) and finally the budgetary session of Parliament.

The Five-Year Education Plan 1976-1980

At the time this plan was approved in principle, the Secretary for Finance warned that there was no guarantee that sufficient finances would be available to meet the plan targets. Funding of expansion would therefore be approved on an annual basis only. The aims of the plan are:



1. To increase enrolment opportunities in community (primary) schools, moving as rapidly as possible towards universal primary education while not alienating students from their local communities. Specific targets were to lift enrolments of seven-year-old students in grade-I from 67.8 per cent of the age group in 1975 to 82 per cent of the age-group in 1980, in such a way as to reduce enrolment disparities between provinces to an insignificant level;

2. To raise secondary school enrolments from 28,916 in 1975 to 41,516 in 1980, by the opening of 34 new high schools spread throughout the provinces. It was not possible to achieve these targets of reducing inequalities of access to secondary education without expanding secondary outputs well beyond identified trained manpower needs. The result is a steadily-growing proportion of high school leavers for whom there are no further training or employment opportunities, thereby requiring a major reorientation of high-school curricula towards local community needs;

3. Expansion of Senior High Schools and Technical and Teachers' Colleges to train enough people to meet identified manpower requirements;

4. Maintenance of 5,000 places in non-formal 'vocational centres' to provide practical skill training adapted to local community needs for adults and school leavers (generally in courses lasting up to one year);

5. To continue the present structure of the education system (six years of primary education, commencing at age 7, followed by 4 years of

Education in countries of Asia and Oceania

secondary). The medium of instruction is the English language throughout the education system.

Provision was made for a mid-plan review, so as to influence the budgets for 1979 and 1980 (the last two years of the current plan). Other targets spelled out in the plan include: Growth in education opportunities to be concentrated in the relatively disadvantaged provinces; increasing contributions in cash and in kind by parents and students towards school costs; an increase in the proportion of female students at all levels; localization of all administrative positions and of as many teaching positions as possible; and development of a national identity and national pride.

Education reforms 1970 to 1978

By far the most noticeable change over this period of developing self-government and independence has been the wholesale replacement of foreign executives by nationals (Secretary and Assistant Secretaries 100 per cent, Provincial Superintendents 100 per cent, teaching force from approximately 66 per cent national to approximately 92 per cent national). This relatively rapid hand-over of control has been made possible through a very elaborate programme of selection and training of education executives, ranging from senior assistants in schools through headmasters and inspectors to provincial and national superintendents, making extensive use of specially-developed administrative training programmes at National Teachers Colleges and at the University of Papua New Guinea and of suitable overseas programmes in Australia, the United Kingdom and other donor countries.

During this period the Education Act of 1970 was implemented, leading to massive decentralization of what would otherwise have been a highly centralized system on the pattern of the Australian State education system. Educational planning was placed in the hands of a National Education Board, comprising a majority of non-education representatives (from other government departments, from church education agencies, from the community, from private groups, from interested parents' groups) together with representatives from the Teachers' Association and the Education Department. The planning and administration of education in the districts (now provinces) was placed in the hands of District Education Boards similarly constituted. It has taken considerable effort over many years to persuade national administrators to surrender real decision-making power to local authorities. This development will now be reinforced through the 1977 Organic Law, which places District Education Boards under the control of Provincial Governments, thus giving these governments final powers and executive control over major decisions concerning educational planning and administration.

Beyond the regular programme of improving school curricula (much of the programme implemented with Unesco assistance; e.g., English, Science, Mathematics and Social Science), political and economic realities have forced a number of major changes in the orientation of schools. First, with the significance of developing a national identity in the period immediately preceding and following the declaration of independence, a veritable cultural renaissance has taken place through the schools. Fridays are set aside as '*Toana Day*' for the wearing of traditional dress. Regular local cultural festivals are integrating students and parents in a joint national effort, reducing the alienation of schools from their communities. Special staff and funds are devoted to the promotion of national and local cultures as a major element of national self-respect. These developments have been reinforced at the national level by the creation of an Institute of Papua New Guinea Studies, a National Arts School and a National Drama group, together with the establishment of national and provincial cultural councils and the completion this year of a new building for a National Museum in Port Moresby. The input from professional students and practitioners of national art forms has resulted in a vigorous affirmation of national culture at new and impressive levels of excellence.

Second, fresh attention is being given to the interface between traditional cultures and modern curricula. For example, the Indigenous Mathematics Project is gathering data on the many and diverse traditional mathematics systems as systems of cognitive organization. The major significance of these findings for methods of organizing instruction on appropriate local bases is only now being grasped, and is expected to lead to significant new developments in curriculum and teacher training.

Third, major efforts have been made to link education and productivity. Two-thirds of high-school students are boarders and economic necessity has resulted in a gradual withdrawal of government subsidies to the extent that boarders are now 80-per-cent self-reliant for maintenance through a combination of regular school production and parental contributions. The occasion has provided excellent scope for the introduction of improved agricultural methods at the schools and for greater student involvement in planning and budgeting production activities and in operating retail stores and other economic services related to student subsistence. Appropriate curricular adjustments have been hastened by the growing awareness of the rapidly increasing numbers of high school leavers for whom paid employment in the formal sector is no longer available. These developments in the boarding high schools have been complemented by the development of a number of other alternative forms of post-primary education, focused on rural productivity and self-reliance.

Education in countries of Asia and Oceania

Some 15 non-boarding high schools have been opened, generally in rural areas which have been under-privileged in respect of access to secondary education. These schools enrol students from a range of up to 15 miles from the school.

Enrolments

The table below summarizes enrolments in the various categories of schools over the period 1971-78 and, for comparison, projected enrolments to 1980. Although there has been a steady expansion of primary and secondary enrolments over the period, the Five-Year-Plan projections assume a capacity to expand at a greater rate than has been experienced so far. Boarding High School enrolments have been 'frozen' at 22,000 and all expansion now is by way of 'day' students.

Papua New Guinea, enrolments 1971-1980, major categories

Year	Primary schools	Secondary schools	Vocational centres	Community secondary education**
1971	203 814	18 609	3 130	-
1972	211 617	22 565	3 761	-
1973	218 167	25 318	4 165	-
1974	229 527	27 915	3 903	485
1975	238 267	28 916	5 415	1 000
1976	250 791	29 465	5 244	2 451
1977	254 103	31 426	5 000	3 184
1978*	293 182	37 554	5 000	3 200
1979*	314 591	39 636	5 000	3 300
1980*	342 743	41 516	5 000	3 400

* Five-Year-Plan projections

** Based on actual numbers of courses sold to enrollees

Equity

The Ministry of Education has increased the quantity of education available and has made moves to reduce the inequities in the distribution of educational opportunities. In the period 1971-1977, the number of students enrolled in primary and secondary schools as a percentage of the school-age population has risen from 35 per cent to 39 per cent. The distribution of education opportunity, however, varies enormously. The percentages of school-age population actually attending primary schools



in the least-developed and the most-developed provinces show a wide discrepancy.

There has always been an imbalance between male and female enrolments in the school system. In 1972, females represented 35 per cent of the total primary and secondary school enrolments. In 1977 the figure was 37 per cent, a very small rise for a period where the total enrolment increased by 17 per cent. The problem of low female enrolments is a function of the level of development of a province and traditional beliefs and practices. The percentage of females in the education system varies from 49 per cent in some of the more-developed provinces to 22 per cent in some of the least-developed provinces.

With regard to reducing inequalities in the distribution of educational opportunities, the increased participation of community representatives in the review of plans and budgets by the National Education Board has provided the kind of political pressures which work against the advantaged provinces in their effort to preserve privilege at the expense of the disadvantaged.

Another major move has been the introduction of the quota system for selection to go on to high school from primary school. At present, the proportion proceeding to high school is approximately one-third, so that in a typical district, the top one-third of grade-VI students in each primary

Education in countries of Asia and Oceania

school is selected for high school. The secondary selection examination is therefore concerned not with selecting between schools but with selecting *within* schools. This creates remedial teaching problems for the staff of secondary schools, but it ensures that all communities which have primary schools have equal access to secondary education and a share of the benefits which follow.

With the passing of new legislation, all schools at a given level receive the same level of support from the National Government. Any schools seeking a higher level of services must fund them out of local resources. The effect of this legislation has been to free some four million US dollars for redistribution to educational services in less-advantaged areas.

Non-formal education

Adult education has received far less funding than has the formal school system. While it is true that in recent years the adult education establishment expanded and that considerable effort is expended on extension activities by other Government departments, it would be reasonable to argue that the rapid expansion of enrolments in a school system only 30 years old, alongside the relative neglect of the needs of adults, has increased inequities between generations. In the financial year 1977-78, the estimated expenditure by government on adult education was only 0.3 per cent of the Education Budget.

Much of the non-formal education carried out in the country is operated through the extension services of the Departments of Primary Industry, Health and Commerce. Of the extension services, the largest group is in agriculture with some 1,000 workers in the field. The service was built on the plantation model and has slowly adapted to favouring progressive farmers growing cash crops. Recently more attention is being given to food production and improving subsistence agriculture as well as assisting small-holder settlements in the cash-crop field.

The Department of Commerce has more than 300 business development officers in the field who assist entrepreneurs in the villages to establish and operate small businesses. The main areas of business are transport, trade stores and livestock projects. All of these groups encourage individual ownership and self-development. The implication of these policies for adult education is that only those people with some land, capital and initiative receive the benefits of education through extension work. The long-term effects will increase class inequalities in rural areas unless the policies are counter-balanced by an egalitarian system of non-formal education for school leavers and adults.

The Department of Health has some 1,400 aid-post orderlies in the field. These orderlies administer basic medication, and provide some basic education on hygiene and nutrition. There are also more than 200 health extension workers who provide education in family planning, disease control and nutrition. The Education Department has only 22 adult education officers in the field. This small group provides basic literacy and numeracy courses and other courses that are appropriate to the needs of the people—but with so few personnel the effect is minimal.

A government decision to rationalize Ministries in 1976 has resulted in the addition to the functions of the Education Ministry the responsibility for culture and library services. When these offices are joined to form one integrated organization, the administrative resources will be available for better co-ordinated attention to non-formal education. A plan to revitalize and expand non-formal education is to be carried out.

Budgeting and planning

Over the period 1974-77, the Education System has benefited from the introduction in all government departments of a system of functional budgeting, whereby all expenditures are estimated and accounted for in relation to specific functions and activities; e.g., high schools, vocational centres, adult education, teacher education—all as separate activities. This has resulted in a much better-informed approach to cost-benefit analysis in planning and administration.

In 1976, the creation of a Planning Services Division in the Ministry of Education has made it possible to integrate such services as data collection and dissemination of information on education developments with planning proposals and the servicing of various policy-making authorities. A recently-developed planning tool is a computer-based simulation model of the Education System.

Technical training by private enterprise

A large copper-mining company conducts a wide range of courses in the technical field. The Forest Industries Training College at Lae offers courses in saw-milling and saw 'doctoring'. The training college is supported by aid from New Zealand. The Departments of Transport and Works and the Electricity Commission offer courses in the trade and commerce fields for employees and trainees. While these initiatives are welcomed by the Government in sharing the costs of technical training, their proliferation presents a problem of rationalization and co-ordination.

Under the present system there is duplication of effort and a variation in standards. Currently 75 per cent of all technical instructors are

Education in countries of Asia and Oceania

expatriates. There is difficulty in attracting and retaining national citizens as technical instructors. The World Bank is funding an expansion of Lae Technical College, curriculum development and the creation of a national training council. These moves will assist in stimulating technical education and provide a mechanism for future rationalization and co-ordination of technical education.

The Holy Spirit High School, generally known as Ulugunan school, was initiated by Mr. Oscar Tammur (now Minister for Education) and his wife. The school began in 1968 with 12 students and in 1978 there were more than 450 students. These come from most provinces in Papua New Guinea and their ages range from 15 to 20 years. The school is located at Matanata plantation near the sub-province headquarters of Kokopo in the East New Britain Province.

In 1976 the Japanese Government provided a grant to establish a national fisheries college at Kavieng, New Ireland Province. The college opened in 1978 and provides practical training in commercial fishing. Courses are offered at three levels, catering for students at university, secondary and primary school levels.

Emerging problems

Current rates of population growth, now 3.1 per cent, are expected to grow to the very high rate of 3.5 per cent in the coming years before the recently initiated *Population Awareness Programme* makes the initiation of an effective control programme a reasonable possibility.

Primary enrolment projections are based on an assumed retention rate of 82 per cent of grade I entrants through to the end of grade VI, but recent surveys of some provinces indicate a retention rate of only 60 per cent. This may in part be associated with the fall in the primary-secondary transition rate from around 70 to approximately 30 per cent in ten years. In the transfer of responsibility for primary education costs to provincial governments, stress is being laid on the budgetary/planning alternatives foregone as a result of this wastage, in the hope of stirring up community concern.

It has been estimated that, by 1980, the accumulated surplus of secondary school leavers over the Five-Year-Plan period will reach 16,537. Curricular re-orientation is therefore urgent, probably also structural re-organization.

With the recently-appointed and relatively inexperienced cadre of national administrators already overcommitted, the introduction of provincial government and project budgeting (National Development

Strategy, National Public Expenditure Programme) imposes substantial needs for training more education planners and administrators. A project to investigate planning needs, assisted by the International Institute of Educational Planning (IIEP), is now underway.

New initiatives in education

The National Development Strategy, by putting all government departments on a budgetary base of zero-increase and then requiring justification for additional grants in terms of projects to facilitate rural development, provides scope for rectifying former inequalities and forces the departments to plan their activities and to maximize the use of available resources in meeting the objectives.

Over the past 15 years, successive governments have been developing a system of vocational centres. The vocational centres are intended to provide a one-year programme of practical skill training for employment and self-employment opportunities appropriate to local communities, but many have failed to achieve these objectives. The students have been young and frustrated rejects from high school seeking to get back into the highly prized, formal secondary school system by way of vocational centres. Few of these students have made use of their training after leaving the vocational centres.

In 1977 the Department initiated, with World Bank aid, a pilot project of testing the feasibility of converting five vocational centres into effective village development centres. In these five centres the sole criterion for enrolment is the desire to learn a skill that the centre can arrange to offer. The skills offered by the centres are those related to village developments that are likely to occur in the area. The village developments desired are determined by a village management structure in consultation with the manager of the centre. The manager then organizes his staff to carry out instruction in the relevant skills *in the village setting* (not in the institution). The trainees are expected to be mature adolescents and adults. Primary education is not a pre-requisite and instruction takes place in the most appropriate language.

The major problem in this and other rural development initiatives is to change the attitudes of the population to accept non-formal education as a means of providing appropriate education and not as a second chance in the formal secondary system of education.

Currently, thought is being given to ways of avoiding the dysfunctions of a dualistic system. This possibility is to be tested out by the Secondary Schools Community Extension Project (SSCEP), a pilot project

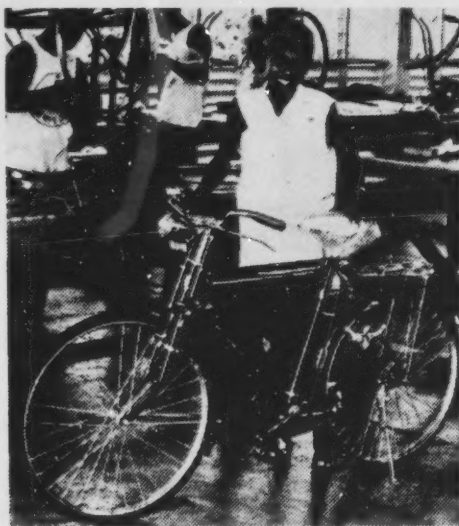
Education in countries of Asia and Oceania

at five selected high schools scattered throughout the country. At these schools all students following the secondary programme in grades IX and X will spend one-third of their time in practical, village-related extension activities to develop their abilities in applying the curriculum to the solution of practical problems in their communities.

The first integrated rural development project was initiated in 1977 with the assistance of the Asian Development Bank. The purpose of the project was to improve rural welfare, especially health and agriculture, in the East Sepik Province through a co-ordinated approach by all government departments and interested private agencies in the province. The education sub-project involves primary, secondary and vocational schools and makes extensive use of the local teachers' college for the in-service training of the teachers involved. Current reports indicate there has been a change of attitude in favour of agriculture and nutrition and there is evidence that newly acquired skills are being used.

The second of these projects began this year in the Southern Highlands Province with assistance from the World Bank. In this integrated project the education sub-project is largely concerned with non-formal education, in particular with extension work in agriculture and health.

The major limiting factor in the expansion of this style of development is the lack of trained and experienced national manpower. It is hoped nevertheless that these kinds of projects will become a feature of development in a number of other provinces in the immediate future.



THE PHILIPPINES

Introduction

The 1970s constituted a period of redirection and adjustment in the Philippine educational system, characterized by a restatement of educational objectives; curricular restructuring stressing work orientation; wider democratization of education; increased attention to non-formal education; and adoption of cost-saving methodologies and other innovative approaches to make education more attuned to the development effort of the country.

The period was marked by the promulgation of two laws significant to education: the Educational Development Decree of 1972 which provides the guidelines for a ten-year educational development programme (1973-1983) and the implementation of educational development projects, and the New Labour Code (1974) which includes provisions on manpower development and has in effect, resulted in organizational changes and a greater participation of public and private sectors in manpower training programmes.

The Philippines, as of 1978, had an estimated population of more than 46 million, characterized by a young age-structure. Around 19.3 million or 41.8 per cent are in the 7-24-year age group. The total labour force of the country (15 years and above) comprises 16.5 million. Around 5.2 per cent of this force—or roughly 664,000—are unemployed.

Current enrolments, in millions, are as follows:

Primary education	7.925
Secondary education	2.482
Higher education	.980
Total	11.387

Of the enrolment figures given above, 95 per cent of the primary-school population are in the public schools and only five per cent in private schools. At the second level, however, 40 per cent are in public schools and 60 per cent in private schools. The picture reaches the opposite extreme at the third level where 90 per cent are in private and only 10 per cent in public institutions.

Education in countries of Asia and Oceania

The participation rate for 7-12-year-olds is 98 per cent; and for 13-16-year-olds, 38.2 per cent. This is among the highest in Asia. The country has also a high enrolment at the third level—2.1 per cent—in relation to total population.

There are in all, 31,319 public primary schools in the country and 2,581 secondary schools. Institutions of higher learning total 997—of which 290 are public or State-supported and 707 are private.

Curricular reforms

Major curricular reforms instituted in the last few years bear a strong work-orientation emphasis, particularly at primary and secondary levels. They benefit from the integration in relevant subject areas of content that reflects the economic and social reforms of the government, with greater emphasis on scientific and vocational work, and technical learning experiences.

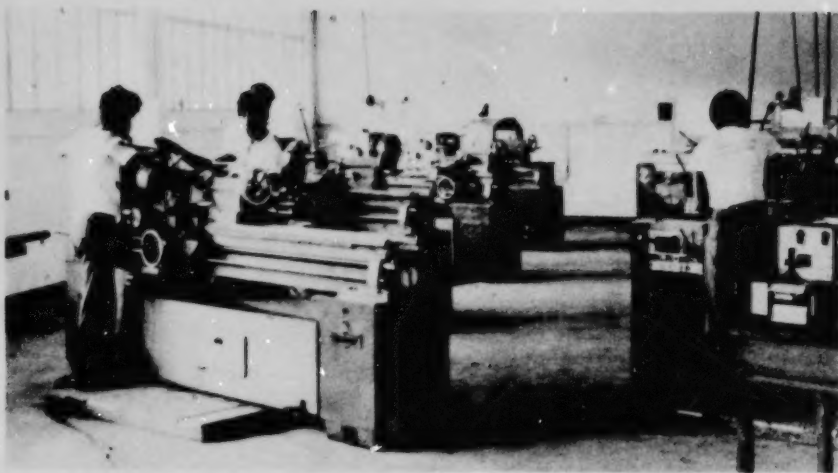
At the first and second levels, a work-oriented curriculum has been prescribed, characterized by the inclusion of work-education subjects even in lower-primary schools and longer practical-arts periods at the secondary stage.

Programmes have been designed which allow students to have academic classes in the morning and practical arts or work education in the afternoon. In certain areas, students are also excused from classes for days or even weeks during work seasons—like rice harvesting or fish-curing—if their help is needed at home in such activities. They are given credits in work education for their participation in such economic activities and take special make-up classes in their academic work upon their return.

To gear education to the national development effort, government reforms have been included in appropriate subject areas. Such content includes agrarian reform, co-operatives, taxation education, population education, nutrition education, environmental education, and forest conservation. In higher education, curricular changes involve the introduction of shortened courses for the training of health, pharmacy and optometry assistants as well as for other technicians to meet employment needs.

Youth Civic Action Programme

A new programme required for all levels is the Youth Civic Action Programme or YCAP. Designed to provide youth with practical experience in social service, YCAP calls for the rendering of at least 120 hours of community service for all junior students at the third level, and for all senior students at the second level. The community service takes many



forms, such as service in hospitals, holding literacy classes for adults, assistance to rural areas in construction of irrigation canals, medical service in rural areas, reforestation or tree planting, and promotion of sports activities among youth. The purpose is to see that all school leavers and college graduates experience service to the community, particularly in depressed areas, and thereby gain some understanding of the problems faced by underprivileged sectors of the population, while actually giving help to the people.





Bilingual policy

A new policy on language in schools has been adopted. Hitherto, English alone had been the medium of instruction in all schools, with Pilipino taught only as a subject. Under the new policy, both English and Pilipino are used as media of instruction at both primary and secondary levels. Pilipino is used in social studies subjects, work education and youth development training, while English is used in science and mathematics.

The shift to the use of two languages as media is gradual. The use of these two languages at the third level has not yet been required although certain colleges which have competent teachers and adequate materials in Pilipino have started to use the language in the classrooms. The objective of this policy is to promote greater national unity through Pilipino as the language of the Philippines (there are 58 major dialects in the country) and at the same time open the door to current knowledge, much of which is available only in the English language.

Democratization of education

Efforts have been intensified to widen access to education. No child is refused admission to the public elementary (primary) schools.

Increased opportunities have been provided to enable the economically 'disadvantaged' to avail themselves of higher education. These include national State scholarships and local provincial scholarships, scholarships for cultural (ethnic) communities and special government

scholarships, which, taken together, total more than 5,000 a year. These are all *full* scholarships including stipends, tuition and allowances.

An even larger number of college scholarships are available under a law requiring every college or university to have one scholarship for every 500 enrolments. One university reports a total of 500 scholars under this programme alone. There are many other government scholarships, such as the Coconut Federation Scholarships which number 20,000, and special science development scholarships.

A recent programme designed to benefit economically handicapped students is the Study-Now-Pay-Later Plan. Under this plan, students are given all their expenses yearly as a loan which will be repaid with very low interest, when they are employed after graduation. Government banks provide the loan fund totalling this year 40 million pesos. As of June 1978, there were a total of 3,790 students in class under the plan. There are, however, priority courses which students must take under this programme, to insure their ready employment after graduation. Most of these are technical-scientific courses.

Maximum use of resources

To enable public schools to admit all students seeking admission, even with the problem of inadequate classrooms, certain measures are adopted in order to use these rooms to the utmost. Among such measures are the two- or three-shift plans, where students come in stages so that one room can be used by three classes each day.

Another measure is the In-School, Off-School Approach where one teacher and one room can serve twice the usual number of pupils. One class stays in school one week and out of school the next week. To keep them busy during the out-of-school period, they are provided with self-learning kits which they study with the help of parents or brothers and sisters. Part of the off-school portion includes practical work, surveys, interviews and projects.

Barangay (barrio) high schools and learning centres

The opening of *barrio* (village) secondary schools, now known as *barangay* high schools, resulted in an unprecedented increase in enrolment at the secondary level. There are at present 1,736 *barangay* high schools in the country while there are only around 845 general and vocational schools. In one province for example, there are 201 *barangay* high schools and only 12 general high schools.

Originally, the then *barrio* high school was conceived as a means to capitalize on existing facilities in order to provide further education to

Education in countries of Asia and Oceania

out-of-school youths in a village, using the primary school when not in use by the regular pupils. Invariably, classes had to be held in late afternoons or evenings, if there was electricity, and on Saturdays. They were originally organized on a self-help basis and offered courses designed to enable *barrio* youths to learn skills which would make them economically productive, and thereby self-reliant.

There has been a recent move to use certain *barangay* high schools as community learning centres. The programme is being carried out on an experimental basis. Under this programme, one *barangay* high school in a region is chosen as a centre. It is stocked with vocational tools and equipment. It opens its doors and facilities to parents and other adults in the community. Parents and children thereby learn the same skills and, hopefully, because the parents are exposed to the same vocational activity, the programme might encourage various home industries with further encouragement and guidance from the school instructors.

Non-formal education

An indication of increasing public interest in non-formal education was the creation in May 1977 of the position of Under-secretary for Non-Formal Education (NFE). Earlier, non-formal education, then usually adult education, focused on literacy. Today various NFE activities have been instituted to meet the needs of the following groups:

- a) Those in the work force who are either in low-productivity employment or unable to find jobs;
- b) Employed and unemployed school leavers who would like to join the mainstream of education;
- c) Adults who need compensatory education. These comprise the people who have never attended school or attended it for a few years and have need for certain general knowledge and basic skills; and
- d) Technical workers and even professionals who need constant upgrading of skills and knowledge to improve their performance.

Aside from literacy and continuing-education classes conducted by the Ministry of Education, a number of non-formal education activities are carried on by various other agencies of government with beneficiaries totalling in the hundreds of thousands. These include:

1. Agricultural production programmes for farmers conducted by the Ministry of Agriculture;
2. A programme in integrated planning for improved living and co-operative education, carried on by the Ministry of Local Government;



3. Rural improvement clubs;
4. Mothercraft centres run by the Ministry of Health;
5. Self-employment assistance and other programmes of the Social Services Ministry;
6. National apprenticeship programmes; and
7. National manpower and youth centre programmes of the Ministry of Labour.

The newly created office of the Under-secretary of Non-Formal Education has started designing functional literacy packages with content on civic education and other useful information concerning government programmes. A plan has also been drawn up for out-of-school-youth education utilizing 'Tanglaw' schools. These are schools that have been provided with electricity and furnished water under the NEA project called 'Toward Aggressive National Growth Through Light and Water' (TANGLAW). Pilot learning centres have also been set up utilizing existing structures.

A massive programme instituted recently is the "*Lingap ng Pangulo sa mga Barangay*." A school-on-the-air programme, the *Lingap* is designed for out-of-school youths, farmers, and housewives who are organized into listening groups in their respective *barangays* with the help of a teacher co-ordinator. The general objectives of the programme are to:

1. Develop proper values, attitudes and appreciation of a rich cultural heritage and to instil love of country, nationalism, spirit of service and

Education in countries of Asia and Oceania

commitment to country and fellowmen;

2. Bring to the rural people information on the latest technologies of farming and food production, community development, nutrition, population control, family planning, health services, natural resources conservation and other related matters;

3. Inform those who participate in the development activities of the government, and how this programme will ameliorate and improve the quality of their lives and the contributions that they make to community movements.

This programme is broadcast over all stations every Thursday and Saturday for one hour in the early evening. Participants in the programme will be given certificates and will be entitled to certain benefits from various government agencies.

Credits for non-formal education

A bold move by the Ministry of Education and Culture is the decision to give credits for knowledge and skills gained outside the formal school system. Announced early in 1977, the policy was welcomed in various quarters for the benefits it gives to those who, for reasons of economic or other difficulties, cannot attend the formal school system with its requirements on attendance and admissions. Accrediting instruments have been developed for the proper grade placement of those who learn the non-formal way and who then find a new desire to enter the formal school system. A total of some 3,000 people took the placement test early this year.

Educational development projects

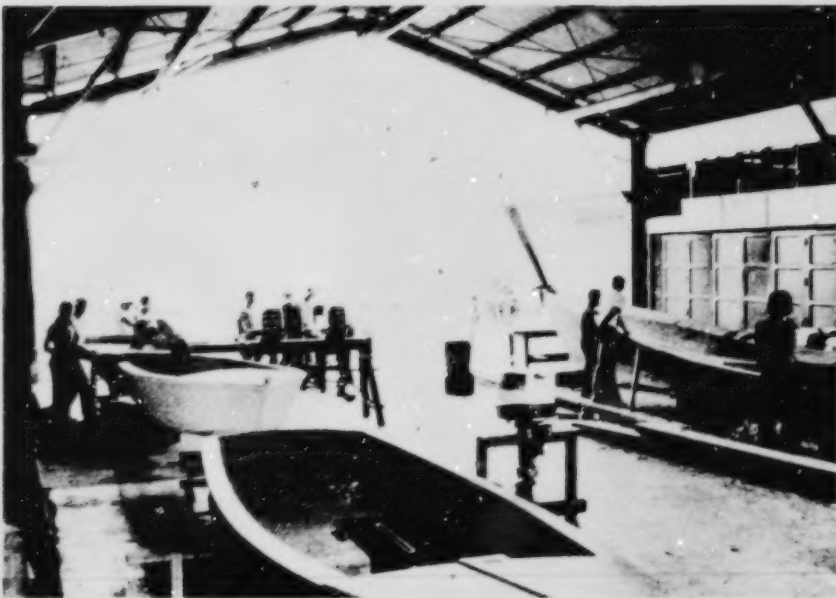
The Educational Development Decree of 1973 specified the objectives for education, which include:

1. Provision for a broad general education that will assist each individual in the peculiar ecology of his or her own society to (a) attain his or her potential as a human being; (b) enhance the range and quality of individual and group participation in the basic functions of society; (c) acquire the essential educational foundation for his or her development into a productive and versatile citizen;
2. Training of the nation's manpower in the middle-level skills required for national development; and
3. Development of the high-level professions that will provide leadership for the nation, advance knowledge through research, and apply new knowledge for improving the quality of human life.

The Philippines

A number of projects designed toward achieving these objectives have been determined. To implement these projects, a body called the Educational Development Projects Implementing Task Force (EDPITAF) has been set up, with authority to utilize the services or facilities of any office under the Department of Education and Culture. These projects, funded by loans, authorized under the Decree, as well as national funds, include:

1. The upgrading of 13 experimental agricultural high schools, through a new educational programme essentially based on the supervised farming concept;
2. Development of institutes for technicians: these institutes are designed for the formation of a corps of skilled technicians who will in turn train others;
3. Establishment of 10 regional manpower-training centres located in various parts of the country;
4. Textbook projects covering textbook printing, distribution and evaluation, and teacher training;
5. Communication technology in education projects which seek to explore the potential of radio, supplemented by print and other media, for rural education, elementary education instruction and the in-service training of teachers;



Education in countries of Asia and Oceania

6. Installation of a Management Information System (MIS) for the Department of Education and Culture;
7. Engineering education, a project which calls for raising the level of the engineering curriculum and improvement of physical facilities in engineering schools; technical assistance is to be provided to 20 selected engineering schools throughout the country;
8. Fisheries education, a programme which calls for the establishment of a national centre for fisheries education at the University of the Philippines College of Fisheries in Iloilo and a network of ten regional fisheries schools;
9. Science equipment, a project to improve science education through the provision of necessary and relevant equipment to schools.

The textbook project. Of the ten-year educational development projects, the Textbook Project is undoubtedly the biggest and has the greatest impact on the school system. The objective of the project is to achieve a ratio of two textbooks for each pupil (the present ratio is only one textbook for every nine pupils).

One of the reasons for unsatisfactory results of instruction at the first and second levels is the lack of textbooks. The Textbook Project seeks to produce and distribute a total of 26.8 million textbooks to the elementary and secondary schools in the following subjects: science, mathematics, social studies, English and Pilipino.

Teacher training. A component of the Textbook Project is the training of a total of 250,000 teachers in the use of the new textbooks. Training will be provided through the network of curriculum development centres at the national level, the 14 regional development centres attached to teacher training institutions, and a total of 84 'development' high schools and primary schools. It is the development schools which provide continuing training for teachers at the local level, not only in the use of textbooks, but also in more effective teaching strategies.

Looking forward

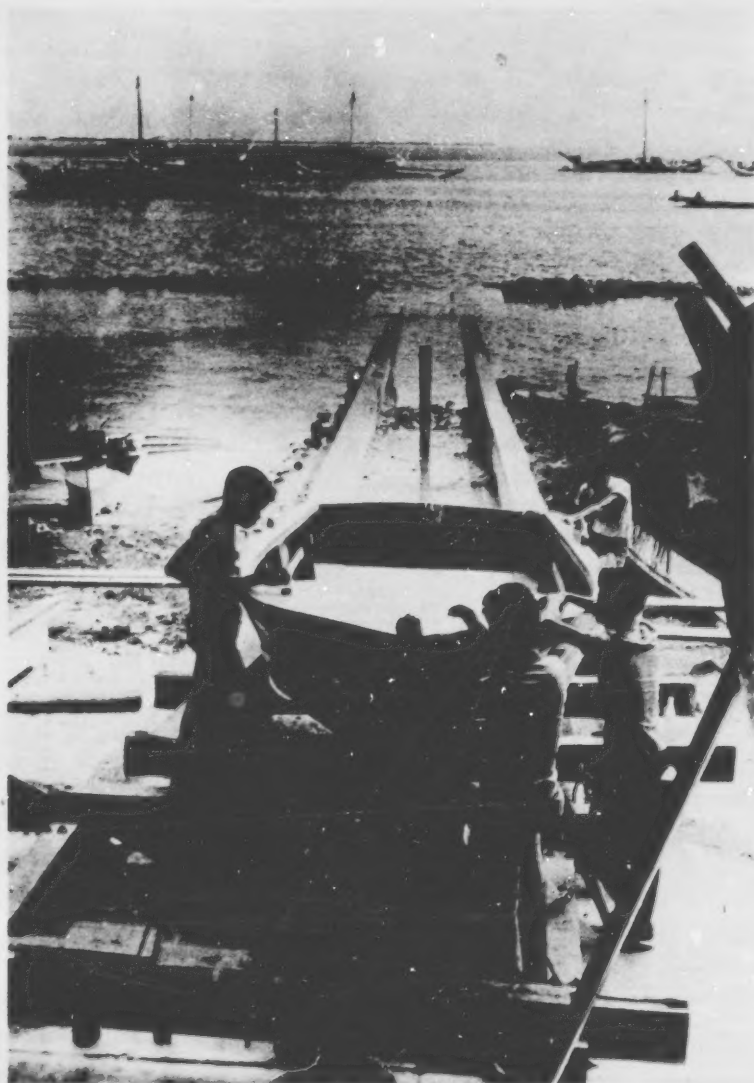
The new five-year Philippine development plan identifies five main areas for major action:

1. Quality improvement of education, and training for entry into the world of work;
2. Development of manpower for farming, fisheries, animal science and forestry to lift the standard of living in rural areas;
3. Development of manpower needed for industrialization;
4. Provision of the resources needed to support education programmes, including greater financial assistance for education and

The Philippines

training agencies in both public and private sectors; scholarships and grants for poor students who qualify, and incentives for deserving institutions;

5. Development of culture, sports and physical fitness, and media to communicate knowledge in support of formal and non-formal education objectives.



SINGAPORE

Background

Since the Third Regional Conference of Ministers of Education and Those Responsible for Economic Planning in Asia, which was held in Singapore in 1971, Singapore has become a different place, not least with regard to education. There are differences in the type and scope of education, and in the degree to which education serves personal, economic and social needs. But most of all, the national scenario for educational discussion has been favourable.

Educational developments cannot be discussed in a vacuum. Social and economic considerations play an important part in determining the scale and type of education that is provided and in shaping the process of education as a change agent, a commitment to develop the potential of every child by means of educational opportunity and fulfilment.

For nearly two decades now, education in Singapore has developed against a backdrop of political stability and continuity. The ability of educational planning to meet the needs of industrial requirements, human resource development and social cohesion is dependent to a large extent on political stability which is needed for developmental processes like education.

Statistical indicators

The period under review saw an increase in the population, estimated at 2.11 million in mid-1971, to 2.31 million in mid-1977. However, the crude birth rate has dropped from 22.3 per 1,000 in 1971 to 16.6 per 1,000 in 1977.

Construction of high-rise apartments in new satellite towns which have grown all over the island Republic has resulted in massive shifts of the population. At the end of 1971, 34.6 per cent of the population lived in these high-rise buildings; by 1977 the percentage was 59.4. Successful family planning education is responsible for a decline in school enrolment for the first and second levels of education. The number of pupils in schools has decreased from 511,460 in 1971 to 484,540 in 1977, a drop of 5.3 per cent. For the same period, there is a 1.1 per cent decrease in the teacher population. The number of teachers has dropped only from

17,500 to 17,310. There is, therefore, an improved overall pupil-teacher ratio which has dropped from 29:1 in 1971 to 28:1 in 1977. The number of schools has decreased from 510 in 1971 to 480 in 1977. This reduction is occasioned by the closure of a large number of small, rural, sub-standard schools which are being replaced by more spacious, well-constructed and better-equipped buildings.

Because of an increase in improved physical facilities, the class-size too has improved from 38.1 students in 1971 to 36.4 in 1977. Expenditure on education has increased by 151 per cent even though the enrolment shows a reduction of 5.3 per cent. With increased facilities for a smaller school population, the recurrent annual cost of education per pupil has increased by 166 per cent between 1971 and 1977.

Structure and organization of education

Education in Singapore is not compulsory. It is, however, universal. This reflects the fact that education is of paramount importance and concern to the population. Being a State responsibility, education at the first level is free while nominal fees are charged at the second level. Private establishment for formal education are very few.

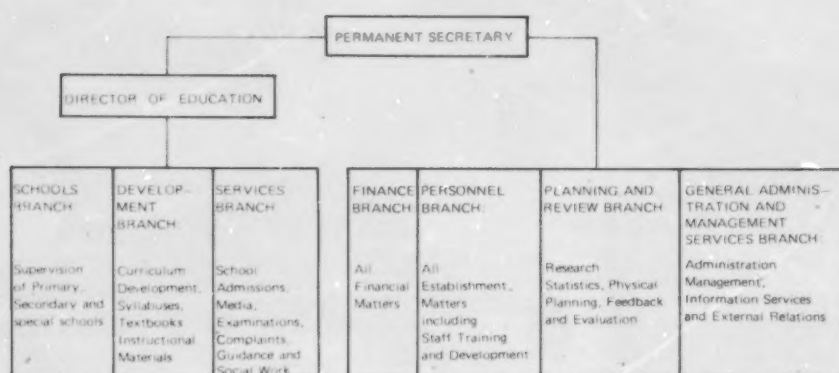
Being a compact island Republic with an area of only about 20 x 30 kilometres, Singapore co-ordinates the administration of education policies at the Ministry of Education Headquarters. Changes in the administrative structure at Headquarters directly affect school administration.

With self-government since 1959, Singapore has been able to streamline the education system inherited from the colonial government and set down its education priorities. Parity of treatment to all the four streams of education—English, Chinese, Malay and Tamil—thus giving equal opportunity in education to all ethnic groups in a multi-lingual society, and the provision of a place in school for every child of school-going age have been the goals.

Having achieved them, the administrative structure was geared to the attainment of the next set of targets and objectives. The post-independence period saw a renewed emphasis on quality, once quantitative expansion in education had been met. Greater authority in school administration was first gradually handed over to the school principals. Effective communication with schools had therefore to be established. With these as management objectives, the formation of a policy-making authority, known as the Ministerial Committee with the Minister as Chairman and comprising the Senior Minister of State, the Permanent Secretary, the Director of Education and other senior officials, was a logical development.

At a semi-policy-making level, a Planning and Review Committee scrutinizes proposed policy changes and the introduction of new measures to the Ministerial Committee for consideration. Headed by the Permanent Secretary, the Planning and Review Committee comprises the Director of Education, heads of all the seven branches (see diagram below) and other senior officials. The Planning and Review Branch serves as Secretariat to both the Ministerial Committee and the Planning and Review Committee.

Figure 1. Organization chart of the Ministry of Education of Singapore



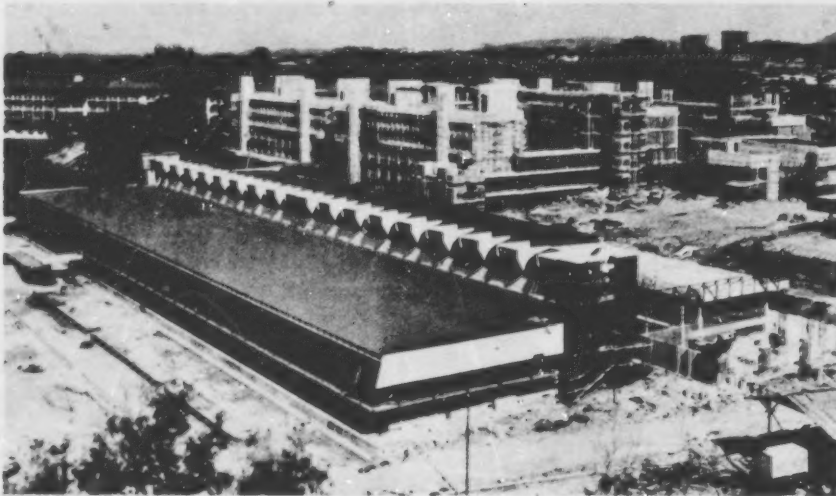
The Personnel branch, besides dealing with routine establishment matters, assumes the important function of staff training and development of both teachers and principals. It also serves as Secretariat to the Staff Development Committee, chaired by the Permanent Secretary. The Development branch is concerned with curriculum and textbooks while the General Administration and Management Services branch provides management services to the schools and acts as a clearing house. This branch, with the Public Relations Department under its wing, also deals with external organizations. In a very centralized system of administration, in which each branch has specific tasks, the function of the Schools branch is, of course, supervision of schools. Educational television, examinations, school admissions, guidance services and social work come under the purview of the Services branch. Concern with planning and development thus goes hand-in-hand with the reinforcement of regulatory control through the inspectorial system inherited from the colonial government. The revised organization, diagrammed above, is a departure from the typical set-up of a Ministry of Education, and is characterized by distinctly separate professional and administrative components. Previously, the professional

officers reported directly to the Chief Inspector of Schools who, in turn, was responsible to a Deputy Director (Professional) and the Director of Education. Parallel to the Professional Division was the Administrative division under the charge of a Permanent Secretary. The revised structure, though by no means perfect, has not only managed to bring the operations at Headquarters under one head but has identified the objectives and responsibilities of each branch. The present organization also provides a capability to respond to changes—as a good organization should not remain static.

Revived school-building programme

Every child of school-going age now has a place. Small rural schools established by private organizations and clan associations during the period of the Colonial government assumed a different attitude when Singapore became independent. The Management Committees of these schools turned to the Government for assistance. The schools thus became Government-aided and at present continue to receive financial assistance.

Rapid physical developments in Singapore, in which new satellite towns are created and large numbers of high-rise buildings and apartments are constructed, have brought about the resettlement of large numbers of the population. This has caused many rural and sub-standard schools to close, and new school buildings have been built in the new towns to accommodate the population shifts.



Thus, the revival of the school building programme in 1973 was in order to improve school facilities and bring education nearer to the children's homes. It is planned that primary school children should not travel more than two miles to reach school. The norm for secondary-school children is four miles.

Under the revived school building programme, 66 new schools (36 primary and 30 secondary) were built during the period 1973-1977. The new school buildings have modern classrooms, special rooms, hall-cum-canteen, sick bay, dental clinic, a library, a playing field, principal's and general offices. In secondary schools, there are additional facilities such as science laboratories, technical workshops, home economics rooms, sports halls and rooms for uniformed organizations.

An interesting feature of the revived school building programme is that schools are built to new designs selected from competitions. The intention is to enable each school to assume a distinct character of its own. This is possible as the demand for places is not urgent and there is sufficient time for an individual design to be prepared for each school.

In keeping with the building of new schools, facilities in existing schools are also being improved. This involves the extension of canteens, the building of multi-purpose sheds for schools without halls; the maintenance and repair of school fields and the rationalization of physical facilities to provide for administrative space, libraries, audio-visual aids rooms and music rooms.

Junior-college building programme

Parallel to the revived school building programme is the junior-college building programme. Attempts are being made to centralize education with grades XI and XII at junior colleges rather than in secondary schools which also cater for children from grades VII to X. The first junior college (the National Junior College) was established in 1968. This was followed by Hwa Chong Junior College built in 1973. During the last few years, three additional junior colleges were constructed and two more are under construction. It is planned to build several more so that, eventually, grades XI and XII will be found in junior colleges only.

It would appear that junior college education is gradually taking its place in the formal education system. An apparent advantage of the arrangement is that the junior colleges function for one session as distinct from the primary and secondary schools which, in the main, operate in double sessions for two sets of pupils and teachers. Teaching staff, moreover, (mainly university graduates) can be centralized in junior colleges,

resulting in optimal and economic use of staff and facilities. Students from the four language streams can also mix together in the junior college environment.

Curriculum diversification and development

Automatic promotion has been discontinued: students are now only allowed to move from one grade to the next if they are able to achieve the required standards at the end of each grade level, while those who cannot are retained. There is, however, a limit to the number of retentions in the system. Should students exceed the two retentions allowed they are given a further opportunity to pursue other forms of education. Diversification of the curriculum and streaming at each level are also practised in order to encourage effective teaching styles and ease of learning.

In Singapore, the standard course at the first level is six years. Those who are not able to achieve the minimum requirements and have exhausted the allowed number of retentions are given a further chance to continue their education at the Basic Course. The total number of years students will spend in the Basic Course and Standard Course is nine. Upon completion of the Basic Course, students are enrolled under the Junior Trainee Scheme (JTS) for a maximum period of three years.

In the Standard Course at the first level, students follow the usual type of curriculum, namely languages, science, mathematics, music, art and crafts, physical education and 'education for living'. A notable feature



is that all students study two languages: English and one of the other official languages. Science and mathematics are taught in English while Education for Living (EFL), an integrated subject comprising history, geography and civics is taught in Chinese, Malay or Tamil. In the Basic Course, students continue to have the same type of curriculum as pupils in the Standard Course except that the contents are modified to suit their capabilities. In addition, the boys are given technical workshop instruction while the girls are provided with home economics lessons.

In the Junior Trainee Scheme (JTS), students are provided on-the-job vocational training in various industrial, commercial and business establishments. In addition to this training, the junior trainees attend day-release literacy and numeracy classes run by the Adult Education Board. It is the intention that trainees in the JTS will ultimately learn a vocational skill for employment and acquire substantial numeracy and literacy skills as well.

Students who are successful at the national examination at the end of the first level proceed to the first stage of the second level (grades VII to X). The curriculum at the second level is generally the same as at the first level. At the first stage of the second level, pupils are also required to achieve the academic standards before they can proceed to the next grade. Those found not capable of following the academic type of courses after a fixed number of attempts are also channelled to vocational courses run by the Industrial Training Board (ITB) or the Adult Education Board (AEB). The courses offer a number of options including engineering trades, commercial and services trades.

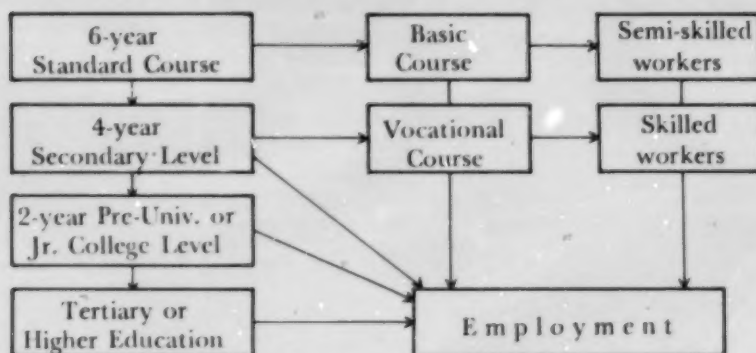
Students who are successful at the national examination at the end of the first stage proceed to the second stage (grades XI to XII). They are then housed in Junior Colleges. Those transferred to ITB or AEB pursue trade training.

Through the structures described above, academically-inclined pupils attend primary school for six years, and are at lower secondary schools for a further four. Those who are identified as not able to follow the academic type of course are given further opportunities for vocational training at semi-skilled and skilled levels. The structure of the system is 6-4-2 as shown in Figure 2.

Education for living (EFL)

In the area of curriculum development, an important project is 'education for living'. Three central aims are embodied in this project. They are:

Figure 2. The structure of education



1. To make students fully aware of the purpose and importance of nation-building, and to be conscious of their responsibilities in nation-building as loyal and patriotic citizens;
2. To guide students towards a clearer understanding of Singapore's historical background and geographical environment, and the treasured values of both Eastern and Western traditions;
3. To help students understand the relations between man and his social and natural environment and to help them to lead a meaningful and useful life in a rapidly-changing, industrialized society.

The development of the instructional materials is guided by the following considerations:

- a) Emphasis is on the nation more than the family and the group more than the individual;
- b) The development of the child as a person is guided by universal values with focus on Asian values;
- c) The development of the child as a citizen is guided by the principles of equality, justice and brotherhood in a multi-racial society.

Eleven themes have been selected for the project. These are: the nation, society (social services), family, school, life, work, cultures, the environment, the world, models and moral issues.

Textbook development and production of supplementary reading materials have to keep in step with curriculum development. Textbooks for EFL accompanied by teachers' manuals are specially produced by the Ministry of Education because of the importance attached to this subject in the education of the young. In addition to textbooks, the Ministry-owned, Educational Publications Bureau also produces supplementary

Education in countries of Asia and Oceania

books and periodicals like *Jolly generation* (for pupils in grades I-to-III), *Young Singaporean* (grades IV-to-VI), *Shao nen* (grades VII and VIII) and *Prospect/Harapan/Changwan* (grades IX-to-XII):

Educational technology. The use of educational technology as an aid to instruction is widespread in Singapore. Educational television programmes have now become part of school instruction: the schools have been provided with video cassette recorders, and programmes transmitted through educational television can be recorded and replayed at convenient times.

Cultural and aesthetic education. In the area of cultural and aesthetic education, the annual Singapore Youth Festival continues to be staged with music and dances written, created and choreographed by students and teachers. Almost every school in Singapore today has a band. Parallel to the Young Musicians Society established for the purpose of encouraging students to maintain interest in the art and practice of music, the Young Artists Society was formed recently. The Society has set up a Centre to sell art work and crafts produced in schools by the students.

Pre-service and in-service teacher training

The quality of instruction in schools—and hence the soundness of education—is to a great extent determined by the abilities of teachers, principals and education administrators. The pre-service functions of the former Teachers' Training College were transferred to the Institute of Education, a statutory board established in April 1973. Organizationally, the Institute has four schools, those of Professional Studies, Curriculum Studies, Continuing Studies and Technical Studies. Each school has a number of departments.

Some innovative features have recently been introduced at the Institute of Education for the purpose of improving teacher education. The cadet-teacher scheme is a good example of relating theory to the practice of education in a training programme. Under this arrangement, the cadet-teachers study in the institute and teach in schools concurrently.

Another feature is the scheme of associated schools which are established for the following purposes:

1. To enable institute staff and school teachers to solve problems together;
2. To provide opportunities for institute staff to demonstrate teaching lessons;
3. To encourage institute staff and school teachers to try out new ways of teaching, and to evaluate the effectiveness of these methods;

4. To establish resource centres (for languages, sciences, mathematics, remedial reading and education for living) to help students learn, and to provide a nucleus for the dissemination of innovative ideas in education.

The creation of a Staff and Training Section in the Ministry of Education clearly indicates the importance attached to teacher education. Pre-service training is but an initial orientation to the profession. For teachers to be effective, continual training through in-service education has to be provided. The Staff Development Committee, which also identifies staff for development, maps out the strategies for staff development. The Staff and Training Section implements these decisions by co-ordinating programmes in a five-year 'rolling plan' for in-service education.



In-service education and training, in addition to being provided by the Institute of Education, is supplemented by officers of the Ministry of Education and other bodies such as the Civil Service Staff Development Institute, National Productivity Board and the Universities. Officers are regularly sent abroad for training in subject areas where such provisions are not available locally. Statistics indicate that about 14 per cent of the teaching force attend some in-service education each year. An interesting feature of the in-service education programme is the introduction of residential weekend seminars for teachers, principals and Education Ministry personnel. Another innovation is a series of 'awareness' seminars on the social, political and economic aspects of the country's development.

Efforts are also directed at raising the academic qualifications of teachers in service. Scholarship and bursary schemes have been set up to enable non-graduate teachers to pursue graduate studies in local and overseas universities. The Advanced Certificate in Education was also introduced to increase the professional competence of teachers.

A recently established programme in a Language Project Centre aims at improving the English Language proficiency of non-graduate teachers who hold the Singapore Cambridge General Certificate of Education 'Ordinary' Level (GCE 'O' Level). This leads naturally to improving the teaching of English. It is the intention of the Ministry that, through these varied in-service training programmes, education personnel can be equipped to deliver the educational content that is being prepared.

School principals

There is no doubt that the position of principal is extremely important for policies to be successfully implemented. Effective teachers and sound curriculum programmes will not bring useful outcomes if those at the helm are inadequate.

In the past, principals were selected from good, experienced teachers. They learned their duties on the job through trial and error. While there may be merits in such a system, it is not entirely adequate. Today's principals have to serve as senior assistants to principals and attend special training courses before they may be appointed to the post.

The Staff Development Committee identifies suitable candidates for training. The selection system is based on the candidates' meeting a series of criteria relating to personal attributes, professional competence as teachers and leadership qualities. The training programme is organized by the Staff and Training Section, and lectures are given by officers attached to the Ministry of Education. For those principals who are already at their job, weekend residential seminars are organized on specific topics including awareness of political, social and economic matters.

With the gradual transfer of more authority to principals, management courses are being introduced. It is the hope that, with the principals and teachers adequately equipped for their functions and supported by realistic curricula, the diversified structure of the education system will lead to less educational wastage. The manpower needs of the nation can then be better met than at present.

Communication between the Ministry of Education and schools

As the administration and management of education is highly centralized in the Republic, effective communication between policy makers in

the Ministry and implementors in the schools is essential, particularly since the Ministry is one of the largest single organizations in Singapore, with some 20,000 staff members and 480 schools. To this end, two monthly publications entitled the *Teachers' rostrum* and the *Staff and training bulletin* are produced and distributed free to every member of the profession. Weekend residential seminars are also organized to provide opportunities for participants and HQ personnel to exchange views informally.

A notable feature is that of the recently introduced visits to schools by the Permanent Secretary who is accompanied by a team of senior Ministry officers. Principals are asked to prepare in advance briefs and points for discussion during the visits. Teachers and students are usually not notified of such visits as the team goes to the principal's office, holds discussions with him and his assistants, provides whatever assistance it can and departs after a quick walk around the school to observe any special problem areas. This form of visit has been very well received by principals and favourably commented upon in Parliament. Back at the Ministry, the end of each visit brings with it a host of issues that need follow-up action. Many principals have sent invitations to the Permanent Secretary to visit their schools, and it is apparent that these measures are fostering a better understanding and rapport between the schools and the Ministry of Education.

Monitoring of educational programmes

Monitoring is a management tool while feedback and research are evaluative devices. In a centralized operational centre like the Ministry of Education, administering about 480 schools, it is indeed crucial that an effective monitoring system be developed. With the introduction of the Basic Course and the Junior Technical Schools in 1977, it was realized that the setting up of a monitoring process was urgently needed. The appointment of the Planning and Review Committee and the subsequent formation of the Planning and Review Branch took place in answer to this need.

This branch also undertakes action research projects on various aspects of educational administration and management. A further area of concern is the review of policies, necessary because policies cannot remain static and must be evaluated in the light of changing circumstances.

Feedback mechanisms help the monitoring process. The Planning and Review branch has for its objective the setting up of mechanisms to obtain feedback information from schools and other sources through various means including questionnaires and surveys. From the results of surveys, individual research proposals can be formulated and studies made to

Education in countries of Asia and Oceania

identify the problems and to find solutions. A massive project was launched in 1977 to survey nine key areas; school administration, professional staff, students, curriculum matters, textbooks, educational media and materials, examinations, extra-curricular activities and guidance and counselling/social work. The follow-up to this project includes a series of principals' conferences for the five districts to which schools have been allocated, with a view to improving consultation and obtaining concrete suggestions for consideration by the Ministry. Proceedings of debates in Parliament are also studied for follow-up action. Newspaper reports on educational matters together with relevant research studies undertaken by concerned organizations provide additional sources of feedback information.

Vocational education

Human resource development is crucial for a country with no natural resources. The Junior Technical Schools are the source for semi-skilled workers. The scheme was launched after detailed discussions with employers' organizations, trade unions and teachers' organizations and is now run by the Industrial Training Board.



Fully skilled workers come from vocational institutes run by the Industrial Training Board, a statutory board established in 1973 as successor to the Technical Education Department. The Industrial Training

Board is tripartite with representatives from the government, employers' organizations and the trade unions. The Board's main efforts are in the provision of institutional training, promotion of apprenticeship and trade testing.

Institutional training is of one or two years' duration. It is highly intensive, offering 35-40 hours of training time per week for an institute year of 40 weeks. There are about 40 courses running in the 12 vocational institutes. These courses range from engineering trades to manual and applied-arts courses. Courses for hotel and printing industries are also available. In addition to full-time institutional training programmes, the Board also conducts part-time and *ad-hoc* courses for workers already employed in industry who wish to improve their skills.

The Board has introduced a three-tier trade testing system with National Trade Certificate 1 representing the highest level of skill. Public trade tests are also conducted for workers who do not have the opportunity for institutional training but have acquired the skills on the job over the years.

The Board's training programme is formulated with the assistance of Trade Advisory Committees whose membership is mainly confined to those from the industries. The Board maintains an effective dialogue with trade associations, employers' organizations and the trade unions. Board members frequently make industrial visits and hold discussions with those in industry. In addition, career pamphlets are produced for school leavers. The Board's research activities are confined to graduate employment surveys, manpower demands and occupational structures of the industries.

The Adult Education Board, besides organizing various adult and continuing education programmes, also provides extensive vocational training for the commercial sector. It trains personnel for such vocations as book-keeper, typist, secretary and account clerk. Duplication of efforts between the Adult Education Board and Industrial Training Board is therefore avoided.

Regional co-operation

Singapore continues to take an active part in the various international and regional organizations like Unesco—including ACEID—and SEAMEO and their regional centres. Singapore also participates actively in cultural and educational activities of ASEAN.

The Colombo Plan Staff College for Technician Education was established in Singapore in 1974. Like all such centres, it conducts training courses and has been a regional centre for exchanges between key personnel in the area of technician education.

Education in countries of Asia and Oceania



A Centre for Production and Training for Adult Education Television has been set up to produce educational programmes for use by national institutions in Asia engaged in the promotion of adult education through television. It also provides facilities for training television producers and technicians from Asian countries.

Conclusion

1971-77 have been active years for Singapore. The emphasis on quality education has led to curriculum diversification, modifications to the education system and the devolution of authority to school principals. It is the belief and hope that these plans will enable children in Singapore to receive good education suited to their capabilities and aptitudes.



THE SOCIALIST REPUBLIC OF VIET NAM

Progress and achievements

Along with the successful August Revolution in 1945 and the birth of the Democratic Republic of Viet Nam, a new Vietnamese education came into being. Education under the French in Viet Nam had been geared to train a local elite as subordinate agents for the colonialists. To this end, its content ran counter to the fundamental interests of the Vietnamese nation. The French language was the medium, even in primary classes. The Vietnamese language, the mother tongue, was treated as a foreign language and was a minor subject in schools under French domination.

The Vietnamese national culture represents 4,000 years of history. Education that meets the aspirations of the Vietnamese nation must be in the mother tongue—the Vietnamese language—whose contents express the fine traditions and quintessence of the nation, geared to train for the country new generations, an education accessible to all regardless of sex and nationality, majority and minority alike.

President Ho Chi Minh set out the following tasks in the first session of the Government Council (3 September 1945): "Combat famine, combat ignorance, combat foreign invasion", the three correlated and long-term strategic tasks for the revolution, particularly for Viet Nam after 80 years of poverty and ignorance caused by the French occupation. Since then, study has become a right and obligation of every citizen. The revolutionary objectives and significance of education were propounded by President Ho Chi Minh in his appeal to the entire nation against ignorance: "Vietnamese compatriots! To preserve our national independence, to build a prosperous and powerful Viet Nam, every Vietnamese citizen should be well aware of his rights and obligations, and secure knowledge so as to contribute his share in national construction. . ." In answer to his call, an anti-illiteracy movement quickly spread over the country. "Popular education" classes were organized in cities, in the countryside, on remote islands, in jungles and even in border areas.

After a year of active struggle against ignorance, the popular education movement recorded tremendous initial achievements. Within this year (8 September 1945–8 September 1946), 2.5 million people among

Education in countries of Asia and Oceania

the 15 million illiterates had learned to read and write the *quoc ngu*—the Vietnamese language. This great educational achievement made important contributions in raising the spirit and capability of the masses as masters of the country, helped them in defending the young State and frustrated all schemes, within and without, to sabotage the new regime.

The revolution required education to serve the nation in an effective manner, abolishing the reactionary obscurantist culture and education imposed by the French colonialists, and building a new Vietnamese culture under the principle "national, scientific and popular." The anti-illiteracy drive was carried on throughout the long years of the resistance war. Up to 1950, ten provinces in the country had won the battle against illiteracy (including 84 districts, 1,500 villages, or 7,530 hamlets with a total of 12 million literates from north to south).

While the people's resistance war grew in strength, popular education developed into supplementary education for adults, who were accomplishing their tasks in battle and production. The supplementary education of workers, peasants and army men assumed an even more important and urgent role when the war shifted into a stage of general counter-offensive. By the close of 1952, 1,500,000 people throughout the country had finished their preparatory courses (corresponding to the third level of general education in schools). By June 1954, 25 regular, supplementary education schools had been built.

In 1945, in all of Viet Nam, there were only 190,000 secondary pupils (early-childhood and third-level schools were unknown then). After nine years of protracted and arduous resistance, the figure mounted to 1,086,171 boys and girls (from early-childhood up to third-level schools). If a comparison is made between the figures of 1945 and 1952, a considerable increase will be seen, early-childhood enrolment increasing by 298 per cent, first level by 40 per cent, second level by 175 per cent and third level by 69 per cent.

Tens of millions of people became literate and millions were attending supplementary-education classes. It was a prodigious achievement and a great success for a nation in which 95 per cent of the people had been illiterate only ten years before. Preliminary but firm bases were laid for a national and democratic education and culture.

After the Geneva Conference was brought to a conclusion and peace restored, 'North Viet Nam' entered a stage of socialist construction. This new stage of history required general education on the one hand to carry on the eradication of the remnants of cultural enslavement by colonialism and, on the other, to bring itself to a higher level both in quantity and

The Socialist Republic of Viet Nam

quality. The work of eradication of illiteracy remained important and was to be completed without delay. By 1958, the number of literates (in the age group 12-50) in the socialist north went up to 91 per cent. And so, in a period of less than 15 years, North Viet Nam brought her 'combat against ignorance' to fruition. For the first time in national history, the northern people had abolished illiteracy, a constant companion of centuries-old feudalism and colonialism. This tremendous educational achievement paved the way for the improvement of the cultural and technical standards of the working people.

Thanks to the appropriate guidelines and measures provided by the State, by 1965, two million people had finished their first-level supplementary education, and 300,000 and 30,000 people had completed their second- and third-level supplementary education respectively. The number of general-education pupils quadrupled as compared with 1955-1956. Apart from the regular general education schools, a new variety of schools combining study with productive work were established. Although newly-built, the study-and-work schools have provided much practical experience in pioneering a new method of development for the general education of the younger generations.

At the start of the socialist revolution in North Viet Nam, one in ten went to school. But after only ten years, in 1964-1965, in the socialist north, one in four attended a regular school. From 1965 to 1972, the



Education in countries of Asia and Oceania

whole country launched a war against the United States of America and the other countries who sent troops and materials. This war was much more protracted and arduous and with more hardships and sacrifices than the earlier nine-year resistance war. Nevertheless, the general education in the socialist north never declined or disintegrated. It grew even stronger in the service of the revolution across the land, defeating the enemies, bringing the socialist construction in the north forward, liberating the south and reunifying the country.

Despite the millions of tons of bombs and shells showered on the north, our people, old and young, never flinched—but heroically went to class under the rain of bombs, as to us, “to study is to win over ‘U.S. imperialism’ . . .” In the fires of the war, unprecedented in national history, our boys and girls, with their traditional passion for study, still went to school regularly. Revolutionary heroism found its expression in the slogan, “classrooms are battlefields, knowledge is a weapon, teachers and students are combatants”. In numerous localities where the war was raging, the movement for supplementary education was kept up, often at the cost of blood. Regularly, over one million people attended supplementary education classes annually. On the average, there were 50,000 who completed the first level of education, 10,000 who completed the second level and 3,000 graduates of the third level. Dozens of villages in the north achieved compulsory first-level education.

During the struggle against ‘U.S. imperialism’ for national salvation, the number of secondary pupils in the socialist north increased annually by 11.25 per cent, and general education regularly provided society with hundreds of thousands of second- and third-level graduates. Since the great victory of 1975, the movement for “teaching well, studying well” has been increasing, thus opening brighter prospects for education throughout the country.

Achievements and experience

Over the past 30 years, general education has occupied an important position and has been considered an integral part of the revolutionary struggle and has, for 20 years, been developing constantly and vigorously. From the plight in which 95 per cent of the population were illiterate, the nation has now become one with fairly high cultural standards. While formerly the children of the working people were virtually illiterate, nowadays almost all school-age children go to class. The working men, formerly illiterate or semi-literate, can now attend supplementary education courses.

Nursery schools have been developing vigorously. In 1956 the enrolment was less than 2,000 children. Since then it has increased 250 times.



With great zeal and love for children, a large number of female nursery teachers have won the people's confidence by their devotion in shaping the young into fine children and bringing about joy and happiness to so many families. The nursery branch has played a practical role in liberating women.

Although meeting with difficulties, the country achieved first-level compulsory education, with an enrolment of over one million, in 1976-1977. Second-level general education has also developed strongly, and it is going to become compulsory in the future. In 1976-1977, there were about two million second-level pupils—an increase of 40 times as compared with 20 years before. The Socialist Republic of Viet Nam is now developing *third-level education* with an enrolment of over 350,000 in 1976-1977—an increase of 60 times as compared with 1955-1956. Every year, the schools supply society with a great number of second- and third-level graduates. In 1975-1976 alone, there were 500,000 second-level and over 60,000 third-level graduates.

Supplementary education has also gone through extensive development and recorded considerable achievements. Over the past 20 years, about 3.5 million people finished their first-, second- and third-level supplementary education. Supplementary education has raised the cultural standards of most of the veteran revolutionary cadres, made active contributions to training generations of young cadres, made active contributions to training generations of young cadres who have sprung up from the working class and the peasantry. Within two decades, the supplementary education schools for workers and peasants have transferred more than 60,000 learners to universities, colleges and vocational secondary schools.

The Socialist Republic of Viet Nam has fundamentally achieved equality between men and women—and between nationalities—in the field of education. In 1976-1977, girls made up 47.36 per cent of enrolments at the first level, 46.56 per cent at the second level and 43.97 per cent at the third level. The number of boys and girls coming from the ethnic minorities has increased rapidly and now stands at more than one million throughout the land. One out of three people in the country is now going to school.

Over the past two years, the southern provinces have recorded considerable achievements in building a new education. Only a short period of time after the liberation, an anti-illiteracy movement spread in numerous localities and, up to the present day, all the southern provinces have fundamentally abolished illiteracy. The work of supplementary education is also on the upswing. By 1977, in all the southern provinces, over 600,000 learners of supplementary education were attending classes from the second- to the tenth grades, and over 30,000 cadres and young people attended nearly 200 regular schools for supplementary education.

The general education schools have resumed their activities and returned to normal. The school-year 1975-1976 went off well; the number of boys and girls at all levels increased; the working people cheerfully brought their children to school. The school year of 1976-1977 saw a fresh advance for the regular schools in the southern provinces: at school campuses located in favourable places for the children of the working people, the number of primary and secondary pupils increasing over that of the previous year (the first-level enrolment from 3.2 million to 3.5 million, the second-level enrolment from 700,000 to 800,000). More schools were built in the former liberated areas and in the new economic zones. The abolition of school fees brought great joy to the working people. All private schools have been nationalized.

General education schools in the south have made great efforts to achieve an all-round education, attach importance to political instruction

The Socialist Republic of Viet Nam

and revolutionary morality, and to carry out the teaching under the new programme and with new textbooks. Moreover, numerous schools have sought to organize manual work for teachers and students; some have produced material wealth with a view to training the students, paving the way for them to engage themselves in productive labour and the construction of a new economy; the teachers and students from numerous schools have constantly participated in such social activities as political campaigns, propagation of the State and the Party's policies, the battle against illiteracy and the drive for supplementary education.

Over the last two years, the nursery branch in the south has recorded considerable achievements. Thanks to the attention of local government using the people's help, the nursery branch is gradually expanding and taking deep roots. By early 1977, in the southern provinces, there were more than 6,000 nurseries. This represents a considerable achievement in new and difficult circumstances.



Special importance has been attached to the work of fostering and training teachers in the south. Great efforts have been made to open more teachers' training schools for all levels, and special attention has been given to teachers from the newly-liberated areas so as to create favourable conditions for bringing into full play their capabilities, to make active contributions to training the young generations.

Generally speaking, in the newly-liberated areas during the past year, the old, backward education has been abolished and a new socialist

Education in countries of Asia and Oceania

educational system established in secondary schools to universities. The movements for the eradication of illiteracy and for supplementary education have developed in all corners of the country. A great number of school children coming from working-class families, long kept in ignorance, can now go to school. The re-education of former teachers in political and professional matters has achieved preliminary success. The work of training new teachers is being stepped up. This is very fundamental for the transformation of the old schools and for building socialist education in the southern part of the country.

April 1977 marked a new advance of general education as a whole, through a conference on the movement for 'teaching well, studying well' in five years (1971-1976). In this movement, which had been initiated by President Ho Chi Minh in 1961, there have been many advanced models, and valuable creations and experiences. It vigorously mobilized the sense of collective mastery in all the cadres, teachers and students. It inspired thousands of teachers, men and women, to train themselves as advanced teachers, millions of pupils to make themselves "Uncle Ho's fine nephews and nieces," hundreds of schools to become the new type of secondary schools with advanced models as prototypes. The conference further developed the valuable lessons drawn from another previous conference in 1971, which re-affirmed the movement initiated by President Ho Chi Minh and constituted a major motivating force to promote general education and inspire the whole system.

In brief, over the last 30 years, general education has been constantly marching forward, socialist schools taking shape and on the upswing, in defiance of untold difficulties and hardships. The prodigious achievements in the field of general education made very important contributions to winning victories over the aggressors and building socialism and are now laying firm and favourable bases for a nationwide educational reform, so as to link education closer to the revolution in the new stage.

Towards an educational reform

In its session in late 1977, the General Assembly of the Socialist Republic of Viet Nam adopted the Second Five-Year Plan, in which one of the major problems is to carry out a reform of the whole system of national education. This is the third educational reform in the country and has the following objectives:

1. *To ensure the attendance and education of the young generations from cradle to maturity, laying preliminary important bases of socialist-minded men as all-round collective masters energetically working for socialist construction and ready to fight for national defence.*

The attendance and education of children of from two months to six years of age is of exceptional importance to the formation of modern-minded man. That is why it is necessary to mobilize and organize work shared by the whole society, to educate the nation's rising generation by developing a network of crèches and nurseries in the countryside and the cities, and building them into an integral part of the system of national education. Children from six years old to maturity enjoy full education in the nine-year secondary-school system and then the three-year high-school system to get them ready for entry into vocations and professions.

2. To practise compulsory education among the people, to ensure the right to education of all workers, peasants and all working people in all localities and of all nationalities, who will gradually attain the cultural standards of the secondary schools.

Education among the ethnic minorities will be developed with a view to abolishing the disparities in the economic and cultural standards and at the same time promoting the national character of each minority.

3. To train and foster a new army of working men on an ever-increasing scale to meet the requirements of division of work in large-scale socialist production.

Vocational and professional education will be developed on a large scale with a view to turning out a large contingent of workers and technical cadres, and large bridges of economic management cadres and scientists, skilled technically and professionally. In this educational reform, the principle will be that of combining theory with practice, study with productive work, school activities with social life. This principle determines the content, methods and structure of the educational system so that educational work is closely linked to national construction. This overall educational reform consists of reforming: (a) the educational system, (b) the educational content and (c) the educational methods.

a) *Reforming the educational system* means educating the young generations, training and fostering the army of scientific and technical workers and opening up roads for constant self-education for the working people, so that socialist industrialization and national modernization can be achieved at a quicker rate. Importance will be attached to setting up secondary schools and classes for children with special aptitudes, and special secondary schools and classes for the handicapped.

In the vocational and academic training systems, the network of vocational schools, and the network of universities, colleges, high schools and vocational secondary schools at central and local levels will be developed and linked to production units and scientific and technological research institutions. Along with the network of regular schools, the

Education in countries of Asia and Oceania

network of after-work schools and classes, including those in the people's armed forces, will be developed.

b) *Reforming the educational content* means raising all-round educational quality and turning out generations of modern-minded working people with a sense of collective mastership to share in national construction.

Along with fostering revolutionary doctrines and establishing a scientific world outlook, greater importance will be attached to fostering, in the young generations, revolutionary sentiments and a civilized way of life, and in the family, social, man-to-man, individual-and-community, citizen-and-fatherland relationships. The programme for cultural, scientific and technological studies will be modernized. What is taught in schools will be the real basis for the development of intelligence, scientific thinking and the will to act.

The school children will be educated in aesthetics through literature, arts and other subjects with a view to creating a genuine outlook on aesthetics, criticising reactionary aesthetic viewpoints, fostering their artistic appreciation and creation, raising sound, pure and rich tastes for beauty.

The schools will pay greater attention to forming sound habits of keeping healthy, through physical training, developing sport activities, improving the quality of the military training in national defence and heightening the sense and capabilities of combat-readiness to fight for national defence. In the secondary schools, methods will be developed of educating the young generations in combining study with scientific experiments, productive work, social life and collective activities.

To gain best results, the school-family-society relationships will be built up to define and bring into full play the educational responsibilities and roles of all sectors, mass organizations, production units and scientific research institutions concerned, and make full use of modern teaching and communications facilities.

In order to achieve the objectives and contents of this educational reform, special importance is attached to training and fostering the army of teachers. The army of teachers constitutes the core and nucleus of educational work and determines the success of the educational reform. *Teachers are combatants on the cultural and ideological front*, with a responsibility to instill in the young generations revolutionary ideals and morals, the cultural essence of the nation and mankind, fan and foster their noble qualities and creative abilities as socialist-minded, working men. That is why teachers, including those in nursery schools, should be *people with noble souls, sound knowledge and a passionate love for the profession and the younger generations*. To achieve the educational reform

concurrently with the reform in training and fostering teachers and the educational management cadres, the following measures will be taken.

1. On the basis of defining specific objectives for each category of schools, the programme and the compilation of new textbooks will be improved.

2. Efforts will be made to combine State funds and the people's contributions, from all sectors and production units concerned and the productive work of teachers and school-children in building school premises, replenishing school libraries, producing and repairing teaching facilities. Schools will receive such modern equipment as tape-recorders, film projections, television sets and other audio-visual techniques.

3. The management of education from central levels downward will be strengthened, more able cadres assigned to improving the style of work and creating favourable conditions for the Education Trade Union, the Communist Youth Union and the Pioneers' League to take an effective part in the management of schools. The Youth Union and Pioneers' League's activities are included in the common programmes of the schools.

4. The research of pedagogical sciences will be further consolidated with a view to resolving, on a scientific basis, the problems of the educational reform and studying fundamental problems in the all-round development of the young generation. More qualified researchers in pedagogical sciences are being trained for this purpose.

This educational reform represents a widespread revolutionary campaign with the participation of the entire people. It will bring practical benefits to each family and each citizen in the country. It is of immense significance to the prospects for the nation and the future of the fatherland.



REPUBLIC OF SRI LANKA

The period 1945 to the present has seen unprecedented numbers enter the educational system. Universal primary education, within available means and resources, was more or less attained, and the proportions entering the second and third levels of education increased phenomenally. In the 1970s Sri Lanka appears to have reached the point when, due to a complex of factors, there is a tapering off in the numbers seeking entry into the first cycle (grades I to VIII or IX) of education. In fact, a plateau stage of enrolment was seen to be approaching in 1965 indicating that enrolment expansion was a phenomenon of the preceding two decades. It is also pertinent to note that an increasing interest in the improvement of the quality of education including the enrichment of curricular offerings also had its beginnings in the mid-1960s. The significant decrease in total enrolment seen from the figures given below could be attributed to the reduction of the number admitted to grade I in 1972 following the change in the age of admission from five to six (see Table 1).

Table 1. Enrolment in primary and lower-secondary education
in 1971 and 1977 in Sri Lanka

	Enrol- ment 1971 (thousands)	(Govt. schools only) enrolment 1977 (thousands)
Primary—grades I to V	1 686	1 492
Lower secondary—grades VI to IX	817	821
Apparent participation rate—(I–V)	91%	82%
Apparent participation rate—(VI–VIII)	49%	42%

There appears to be still no lack of interest in upper secondary and higher education, as is evidenced in Table 2. This appears to reflect heightened interest on the part of those motivated by higher job aspirations and the lowering of interest on the part of those who normally terminate their education without proceeding to the second cycle.

Another feature of the enrolment expansion in the upper-secondary level and at the university undergraduate level is the very significant expansion shown in enrolments in science. At the upper-secondary level the

enrolment in science increased by 70 per cent between 1971 and 1975 while the corresponding increase in non-science was 50 per cent. At the university undergraduate level the enrolment in science-based studies between 1971 and 1977 showed a 56-per-cent increase while enrolments in arts and humanities showed an 18-per-cent decrease.

Table 2. Enrolment in upper-secondary schools and universities—
1971, 1975 and 1977, in Sri Lanka

	Enrolment 1971	Enrolment 1975	Enrolment 1977
Grades X to XII	46 128	71 776	148 901*
Participation rate, IX to XII	20%	—	23%
University full time (undergraduate)	10 481	—	14 858

* This includes the new grades X and XI students (senior-secondary under the 1972 reform proposals).

The race for third-level education is a very keen one and the numbers seeking entry into the university and other tertiary institutions are increasing, so much so that the country is finding it difficult to satisfy the demand for places even while expanding the present universities and opening additional ones.

It has been the policy of successive governments since 1945 to diversify education, and the period under review saw both the diversification of courses at the general second level (both lower- and upper-secondary) and at the third level and the provision and expansion of new secondary and post-secondary technical/vocational institutions. Changes instituted during this period in the school curriculum included a new, integrated primary curriculum, a common lower-secondary curriculum for all students including integrated science and mathematics, and an upper-secondary curriculum that included community-based, work-oriented elements. The diversification of courses at the lower-secondary level was through the introduction of work-oriented, vocationally-based subjects into the curriculum of general education. The provision and the expansion of technical and vocational education was through the establishment of technical and polytechnic institutions, and the introduction of a variety of technical/vocational courses in non-formal programmes of education.

Some years ago, the universities then existing were brought under one umbrella and made campuses of one university. Since this rationalization of university education did not work satisfactorily, the campuses

Education in countries of Asia and Oceania

are again being changed back to autonomous universities. In addition, the present government has decided to establish at least three additional universities immediately, with a view to increasing university enrolments. The present enrolment in universities, which is one-per-thousand of the population, will thus increase appreciably.

Statistics indicate that Sri Lanka has one of the lowest pupil-teacher ratios in Asia. The ratios that were 30:1 for primary and 24:1 for secondary schools have now changed to 21.72 for primary and secondary combined (see Table 3). The period also saw an increase of 88 per cent in the cadre of teachers with University Degrees from 10,003 to 18,854 and a 46-per-cent increase in the number of secondary and general-trained teachers. The number of science, mathematics and general-trained teachers in service also doubled while the total number of teachers increased by 25 per cent. This should not be interpreted to mean that the schools are well staffed with teachers; in fact, there is an acute shortage of science and mathematics teachers at the lower and upper secondary stages in the Sinhala medium—so much so that the cream of the rural children have had to leave school without completing their secondary education in science and mathematics. This ends their chances of going into higher education and is one of the inequalities in the present system of education, in spite of more than doubling the number of specialist teachers deployed in the period under review. There is also a shortage of teachers of English.

Table 3. Sri Lanka, numbers of teachers, pupils and pupil-teacher ratios, 1971–1977

Year	Total number of teachers	Total number of pupils	Teacher-pupil ratio
1971	90 625	2 654 503	29.29
1972	92 558	2 492 754	26.93
1973	97 386	2 538 435	26.07
1974	98 691	2 475 433	25.08
1975	99 067	2 431 626	24.55
1976	105 950	2 461 503	23.23
1977	113 379	2 462 147	21.72

Source: Ministry of Education Statistics.

The expenditure on education has risen sharply between the years 1971 and 1977. Education's shares of the GNP and the National Budget

have shown a steady decline, being respectively 4.6 and 13.4 per cent for 1971 and 3.6 and 9.7 per cent for 1976. The unit-cost of general education increased from 184 rupees in 1971 (corrected for 12 months) to 321 rupees in 1976.* Although in real terms the increase may not be high, the figures indicate that it is still significant. The improvement indicated above in pupil-teacher ratios and the improvement in the teacher cadre in terms of qualifications—and therefore of pay—accounts for the increase in costs. The proportion of the education budget spent on teachers' salaries remains in the region of 86 per cent, removing any hopes of improving the quality of education by tilting the balance even a little in favour of those other things that mean so much to quality improvement.

The period under review also witnessed an unprecedented interest in the institution and diffusion of non-formal education. Non-formal education is now viewed as being a part of general education. Courses in employable skills of short and long duration offered by the technical and vocational institutions are being supplemented by courses in skills training for school leavers, adult classes and centres, and classes in English for adults, and courses in skills through correspondence (distance learning).

During the period since July 1977 it has been necessary to evaluate dispassionately the reforms in education made earlier and in the light of opinions expressed by educators and the people of the country, to consolidate those features that are desirable and change those that are not. The period of schooling accessible to all has been increased from nine years to ten and the age of admission, which had been raised from 5 to 6, reverted to 5, resulting in an open-access span of 11 years; one year of



* 15.65 rupees = one US dollar

Education in countries of Asia and Oceania

kindergarten and ten years of formal schooling. Meanwhile, the demand for more education at upper-secondary and higher education stages is becoming irresistible. In keeping with world trends, the extension of secondary education to grade XII is now under consideration. This means additional costs, but the costs will bring about benefits in their train.

Fortunately, some of the problems that plague other developing countries do not afflict Sri Lanka as much. To a very great extent, the problem of illiteracy has been solved thanks to Buddhist educational tradition and the enlightened educational legislation enacted in 1945 and 1951. Men and women are equal in all respects and they receive an education in keeping with their ages, abilities and aptitudes as far as resources permit. Some of the imbalances that we have inherited still remain with us, nevertheless. These are the imbalances in the provision of opportunities for the urban and rural children and those of learning media. The provision of full-scale technical/vocational education geared to available job opportunities and the provision of a relevant education through the school system, catering not only to those who proceed to higher education but to those leaving the system at the various terminal and intermediate levels, are perennial problems that developing countries have to face.

There is also the problem of unemployment among the educated. When such unemployment occurs in the professional and technical fields it is a matter requiring attention to correct the mismatch between such education and employment. Another phenomenon occurs where education leads to job expectations higher than the economy can provide. While it is true that the overall goals of education *must* be wider than mere preparation for employment, the phenomenon of education leading to unrealistic job aspirations is a matter for concern. This is particularly so when one observes that among the employment seekers the percentage of youth who have at least completed secondary education is higher than that of those who have had no secondary education.

Underlying all of these are the financial constraints. In Sri Lanka almost the whole of the education budget is the responsibility of the State. Although education's share of the GNP was formerly high, it has now fallen below 4 per cent. This, coupled with a rather stagnant and low national product, does not give the education system sufficient resources to improve the quality of education. As the dynamics of the system would tend to increase the proportion spent on teachers' salaries, a large overall increase is necessary for even a small increase in the proportion of the non-salary component. Moreover, foreign aid to education in Sri Lanka has not been significant.

Reforms, objectives and priorities

As a result of hasty implementation of educational reforms in the past and what has been called the interlocking of field trials and school-level execution, a burden of change was imposed on the school system that it has not been able to absorb. It must be observed that the decision to prune down the duration of institutionalized education, while resulting in a saving in expenditure, has led to the lowering of education standards.

The objective in education has been identified as: "to bring forth a self-reliant, educated and disciplined citizenry who, while appreciating and valuing the cultures and traditions of their forebears . . ., and while growing up with goodwill towards the international community and with understanding of global issues, will have the necessary knowledge, skills and attitudes to work towards and fit into a new socio-economic structure. They should have qualities of tolerance to appreciate one-another's point of view and live in peace and harmony in a multi-ethnic and pluralistic society, and together as a nation, face the future with confidence." *Priorities in education are the provision of:*

1. A complete general education that will provide every citizen with the requisite knowledge, skills and attitudes;
2. Diversification of secondary and post-secondary education through the provision of technical/vocational subjects in the school system; technical/vocational units for school leavers and others not gainfully employed; and technical and vocational education through appropriate institutions;
3. Increasing opportunities for higher secondary and tertiary education;
4. The provision and diversification of non-formal education so as to provide continuing lifelong education to all, and;
5. Removal of the imbalances and the inequalities that obtain in the present system.

Continuing issues in education

Equalization of opportunities. The government is concerned with the inequalities that exist in the provision of education. Universal primary education has been more or less achieved, for there is a school in almost every village. The improvement of the quality of these schools, more especially the small schools, is engaging the attention of the government. It is also the government's endeavour to equalize opportunities at the second and third levels, in part through scholarships awarded at grades V and X and upward into university. The granting of bank loans to university students is another measure taken to help disadvantaged groups to

gain access to higher education. It has also been decided to establish two Central Schools in each electorate providing residential education up to the higher-secondary stage in the sciences and arts.

The absence of a proper system of grading of schools has made it possible for glaring discrepancies between regions and between media to pass unnoticed. Likewise, universities and other third-level institutions are being established with a view to providing more places. Non-formal and adult education programmes are being expanded for the benefit of those out of school. Lifelong, continuing education for all—within the resources of the government—is the aim of non-formal education.

Technical and vocational education at senior-secondary and higher education stages has received greater attention since July 1977. Notwithstanding the urgent need for skilled manpower, technical school enrolments in full-time courses increased by only about 10 per cent, from 8,941 in 1971 to 10,045 in 1976. The current plan envisages the establishment of a Polytechnic Institute in each district. At the end of the plan period in 1982, the technical school population is projected to rise to 20,000—a two-fold increase during the plan period. The annual output is expected to be increased from the current 4,000 to 8,000.

Equal access to education. The democratization of education in Sri Lanka can be said to have started in 1945, although much still remains to be done. While every effort has been made to provide opportunities for all to start the race on more or less equal terms, even the best-equipped do not end the race together. Most fall by the way, due to a variety of socio-economic ills that afflict human societies the world over. The provision of the skills in the 3R's does not add up to democratization. The reasons for this are many. A few of these:

1. Lack of resources necessary to build up the under-privileged schools. The unit-cost of education will indicate how little is spent on the education of pupils. The low magnitude of the national product, the slow rate of economic growth and galloping inflation combine to make the share of the cake smaller and smaller for the under-privileged child.

2. The concentration of the bigger institutions in the urban areas and the consumption of a very large portion of the resources by them, resulting in very little being available for the non-urban institutions.

3. The unfavourable location of many schools, rendering them unattractive to teachers.

These neglected-area schools do not share in producing the intellectuals of the country and, in turn, they are not served by them. It becomes difficult even to staff these schools, as people who have an abiding interest

in these areas are not generally found among the qualified. The better-motivated pupils migrate to the better schools, leaving the poor schools impoverished. Impoverished conditions discourage the teachers. A vicious circle results: the schools do not produce qualified personnel and few qualified persons can be found to teach in them. The few who do well also migrate to the urban areas and are lost to the villages of their birth. The efforts over the years certainly have improved the educational facilities of all schools, no matter where they are, but the gap between the better-equipped and the poorer schools seems to widen.

The country is therefore considering the decentralization of the budget and, in fact, the budget in certain areas as in the construction of school buildings has already been decentralized. It is also the intention of the Ministry to institute a needs survey and to assign resources to the electorates on this basis.

Very soon a new District Administration scheme will be in operation in Sri Lanka. For the purpose of decentralized and more effective administration, the country will be divided into 24 districts. A District Minister will be in charge of the implementation and co-ordination of development and service activities of each district. The institution of the District Ministers too should ensure a greater degree of decentralization of men, materials and money deployed in each electorate and thus work for greater democratization.

Opportunities in non-formal education. The concept of lifelong learning has been a feature of Sri Lanka culture from almost the inception of organized society, with emphasis on the spiritual and religious regeneration of people. In the present context of education, non-formal and formal education function as a continuum providing opportunities for learning in school and outside it. But all opportunities for non-formal education have not been exploited due to various constraints.

It is not only the Ministry of Education that has responsibility for non-formal education. Other Ministries too, for instance, the Ministry of Health, the Ministry of Small Industries and the Ministry of Agriculture carry out programmes in this sphere of activity. Literacy is not the problem; providing access to knowledge and skills useful to the people and to society is the aim of these non-formal education programmes.

The opportunities for the provision of non-formal education in a society that is keen on the acquisition of knowledge are inexhaustible but the utilization of these opportunities requires materials and money.

Organization, structure and content. The structure and content of education has received very great attention in the past few years. An



earlier 6+3+2+2 pattern is once again in effect. The content of education in the school system now provides for an integrated curriculum at the primary level, followed by a common curriculum at the lower-secondary stage, leading to specialization at the upper-secondary stage. This structure is in a transitional stage and an Educational Reforms Committee is considering this aspect of the matter.

The organization of the system does not appear to have received much attention in the past. Except for a compartmentalized division of authority into primary, secondary and technical education or a division into discrete functions such as planning, designing and implementation, the Ministry had not made much headway in coming to grips with the problem of organization. The Ministry's present organization provides for a division of functions at the centre and in the country, which makes for much more efficient servicing of the schools by the centre.

The educational personnel form two principal categories—the teachers and those involved in educational management. The training of both categories has received earnest consideration. The education of teachers is being reformed on the basis of an induction into teaching, institutionalized education, training *in situ*, and service-long education. A Staff College has been set up to train the management cadres.

Opportunities for the people to participate. The government has taken action to draw up a Parents' Charter with a view to reminding parents of their rights and obligations towards the education of their children and guaranteeing to them a certain degree of participation in the affairs of schools. It has also been proposed to broaden the base of the Parent-Teacher Association which every school is required to organize by the inclusion of past pupils and others, to reconstitute the Associations

as 'Development Councils' and to ensure to them a greater degree of participation in the development of the schools than hitherto.

Efficiency in education and mobilization of resources

Wastage and under-utilization of resources. The rates of premature leaving of the school system (dropping out) and the rates of repetition indicate a wastage in education in Sri Lanka. This, it would appear, is not as high in some other developing countries of Asia (see Table 3).

Tied up with these rates are the rates of non-enrolment. Those dropping out and those not enrolling become a burden to the State in more ways than one. The causes of this wastage have been studied and found to be very complex. Certainly the lack of relevance between curricular offerings in school and the felt needs of the societies from which the children come is one of them. It is the opinion of many that, given the structure of society and the level of development of the country, this is a short-coming that is impossible to remedy through a centralized educational system offering a central curriculum that is patterned to select and certify on the models of the Western systems of education.

Table 3. Drop-out and Repetition Rates, by grade—1976

Grade	Drop-out Rate (%)	Repetition Rate (%)
I	0.8	15.6
II	2.3	12.6
III	5.5	12.2
IV	7.4	10.9
V	10.2	11.8
VI	7.5	6.3
VII	6.3	4.6
VIII	13.9	4.6
IX	50.7	25.9
X	74.8	1.5
XI	2.6	2.6
XII	74.8	25.2

Source: Sri Lanka Ministry of Education Statistics.

Repetition is also a form of educational wastage and one of the causes also of dropping out of the system prematurely. Automatic promotion through the grades has been discussed but not implemented. Talk of 'standards' in education has led to a retreat from trying automatic

promotions (Singapore found that standards dropped). Repetition in the proportion that is taking place in Sri Lanka today, and the effects of repetition; namely, waste of resources, wastage in education through premature drop-out, and the psychological damage caused to pupils by the sense of failure and frustration coming from enforced repetition, have to be weighed against the desire for maintaining standards in education where normative standards for grades have not been worked out.

In Sri Lanka a minimum of 200 days and at least five hours each day is used for instruction in schools. Due to various considerations such as the non-provision of a suitable mid-day meal, double sessions are not being encouraged by the State, although schools are at liberty to institute them. Occasionally, due to increase in the intake, dual sessions in some urban schools become inevitable. In such instances there is a reduction of time to permit both sessions to complete their programmes during the working day. In addition, schools are utilized for conducting non-formal educational programmes. Schools are also used by other Ministries and Departments for community development activities and also by the community for their socio-cultural and other activities.

The educational technologies used in the school system—and ranging from the chalk-board to simple science equipment—are made of cost-saving, local materials. There is a Science Equipment Design Unit located at the Curriculum Development Centre and an Equipment Production Unit, both used to serve the school system to the utmost. Soon the use of centrally-controlled media in education is certain to receive a major extension with the introduction of television broadcasting in the country. At present there are educational radio broadcasts only. This country has otherwise not gone in for sophisticated, imported techniques. Such gadgetry as overhead projectors, the tape recorders and teaching machines are conspicuous by their absence in the classrooms. Teachers and teacher-educators are encouraged to design simple aids and use low-cost technologies in the conduct of their everyday lessons.

Finances and supplementary sources of support

The education budget is almost wholly the responsibility of the Central Government. Education being free from the kindergarten to the university, the running of the schools and the institutions of higher education alone consumes almost 10 per cent of the national budget. To this has to be added the technical/vocational education programmes of a non-formal nature conducted by other Government Ministries and Departments and the other services of an educational nature provided by the government. An Inter-Ministerial Committee has been appointed to co-ordinate the

technical/vocational programme run by all government departments and ministries. This co-ordination will result in the more efficient utilization of resources invested in technical/vocational education.

In regard to the planning of education, the plans emanate from a Central Co-ordinating Committee of Secretaries of Ministries; this macro-level planning strategy takes into consideration the sectoral plans of each Ministry. Within the Ministry of Education there is a Planning and Programming Division and planning is headed by the Minister with the secretary and all other divisions participating.

The country, although not affluent by Western standards, is supporting the educational endeavour of the central government. The provision of land and buildings by both the rural and urban people of the country in support of their children's education is a conspicuous activity. According to a recent study made by the Ministry of Education, about 10 per cent of the total construction costs of school buildings is borne by parents and others. Non-formal education is supported by contributions from the learners. The decentralization of education under the scheme for the institution of District Ministers should result in a greater degree of support for education from the people.

Mechanisms for the involvement of people in education

A constant dialogue goes on between the Ministry of Education and the people. This dialogue is sometimes carried out through formal channels, as when the committee appointed to advise the Minister on educational reforms invited formal representations from the public. It goes on through the active press of Sri Lanka. The teachers and their trade unions are also active in responding to changes in education and the government has necessarily to share its views with them.

The organizational structure of the Ministry provides for the inter-relationship of units in the field and the decision- and policy-making authorities. What is not apparent is the inter-relationship between the Ministry and the people not directly participating in the educational enterprise. To understand this participation is to understand how democracy works in Sri Lanka. One has also to understand how the institution of the Member of Parliament functions in the country, a democracy where the people's will is highly valued, and where myriad channels of communication operate between those in decision-making positions and the electorate. No special incentives appear to be necessary to involve the people in education or to mobilize their resources. What appears to be wanting is the capacity of officialdom to respond adequately to the initiatives and

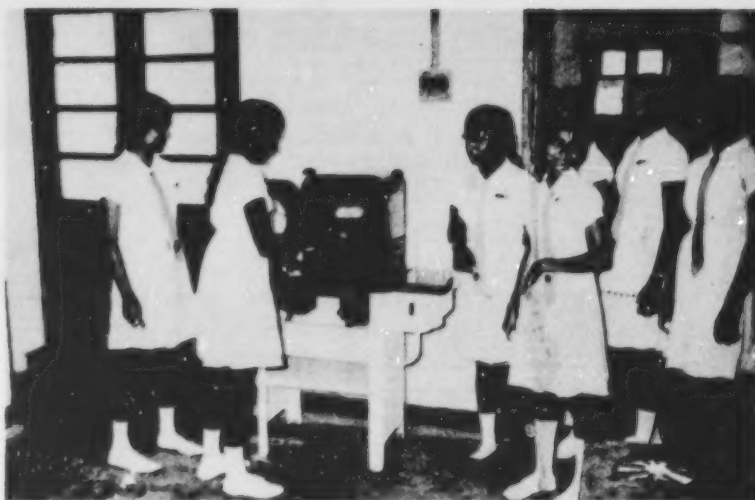
overtures made to them by the people, with their heightened interest in the development of education

On all major issues it is now proposed to involve the people in direct decision-making through referenda. This is the declared policy of the government and should in the future apply to major decisions in education as well. Further, the country has always regarded anyone who has any knowledge or skills to impart as deserving of respect. Inviting them into the classroom to teach and inspire the pupils and teachers alike has been a tradition in Sri Lanka. It is in this spirit that civics as well as vocationally-biased work-oriented subjects are taught, and the same principle applies to the teaching of technical subjects in schools and of vocational/technical subjects to school leavers and others in the technical units. Participation has been sought in curriculum development, in teaching, in the training of teachers and in the evaluation of pupil performance.

Inter-linking education and productive work

The country can be proud that the beginning of interlinking education with productive work, both in school and outside it, as well as on education contributing to community development, took place long before independence. It is even asserted that India's 'Wardha' Scheme of Basic Rural Education drew its inspiration from the Handessa Scheme started in Sri Lanka in the early 1930s. The Handessa Scheme was a very fine example of both the inclusion of practical skills in the school curriculum and of orienting education to contribute to village and community development. This thinking in part was gradually revived and, based on a special report on education in the mid-1940s by a committee chaired by the then Minister of Education, Dr. C.W.W. Kannangara, the development of productive skills through the curriculum was given legal sanction. This led to the institution of a wide range of other activities: the teaching of wood work (carpentry), metal work, pottery, lacquer work and weaving in the middle school, right to the stage of the General Certificate of Education (Ordinary Level), and making them examination subjects. For the first time, skilled craftsmen from the community, such as carpenters, found an honoured place on the teaching cadres of schools.

The Teacher Training College curricula too were diversified, and a special category of teachers called Vocational Trained Teachers, who enjoyed among trained teachers the highest status as secondary trained teachers, was created. In turn, a category of school inspectors called Inspectors of Handicrafts was appointed to oversee programmes in the practical arts in the schools.



The Work Experience Movement instituted in 1965 and the Pre-Vocational Studies instituted in 1972 derived their inspiration from this work, while Project Work that contributed to community development instituted in 1975 derived its inspiration from the Handessa Scheme of education. In Project Work, attempts were made to integrate work and learning by making the real-life concerns of the community the bases of academic inquiry, without recourse to sterile hypothetical problems. It was thought that such a strategy would lead to a better transfer of training and thereby make school learning a worthwhile preparation for a productive career.

The consensus is that productive work has a place in general education, and that, to the extent it is strengthened, it could lead to national development, particularly by helping pupils to discover their talents, imbibe healthy attitudes to the world of work and later find avenues of employment and self-employment. To this end, vocationally-oriented subjects are included in the school curriculum, and experienced people from the community are invited to participate in teaching.

The contribution that schools should make to community development is also acknowledged. The new, advanced-level school time-table requires the devotion of only 32 out of 40 periods of work for compulsory academic subjects. This leaves the school the freedom during the remaining eight periods for activities to enhance the pupils' experience. One of the areas recommended is national service.

Education in countries of Asia and Oceania

Follow-up training in vocational activities oriented towards employment and self-employment is provided at the end of schooling. The teaching of vocational/technical subjects at an advanced level of sophistication to school leavers is one of the main programmes of non-formal education and is proliferating so fast that it is becoming very popular with the youth of this country. The instructors for these programmes are drawn from the community.

The causes leading to unemployment and under-employment are so complex that education cannot by itself reduce substantially the magnitude of the problem. Out of a labour force of some 4.7 million some 1.2 million were unemployed in 1977. *It is a serious matter that no investigation has been undertaken to study successful endeavours on the part of countries facing unemployment of very high magnitude such as is the case in Sri Lanka.*

Neither technical education nor even science education are panaceas. It has not been demonstrated that even science learning in school in the present academic way has made the pupils think scientifically or with logical precision when faced with the normal problems of life. Whatever other reasons there may be for the retention of certain subjects in the school curriculum, it has certainly not been demonstrated that teaching them makes the pupils imbibe the attitudes associated with the subjects. Thus the introduction of subjects which have some common features with the world of work may *not* directly lead to the pupils becoming productive workers later. In the absence of concrete studies all that can be said is that certain philosophies appear to be tenable, although it has not been demonstrated that they have worked in the case of developing countries.

Reform of education closely linked to development

The account of education given in the foregoing sections would give a clear picture, however briefly, of the conception of lifelong education and its implementation within the means available. *The recent past period witnessed the country's reaction to the introduction of innovative programmes which, though well intentioned, were hastily implemented and failed to consider the capacity of the educational system to absorb change. This has apparently led to a disillusionment with innovation. It is necessary, therefore, to tread warily and, hence, the aftermath of the change that took place in 1977 is witnessing in education a retracing of the steps taken in education with the consolidation of those desirable features that the system and—more especially, the teachers—could handle. In a desire to innovate, on the pretext of facing up to the challenges of the times, it would be unwise to 'throw out the baby with the bath water'.*

Although Sri Lanka must be wary of reform, there is a place for action research for the investigation of methodologies and practices that will lead to the improvement of the quality of education. This is being encouraged. Evaluation, both formative and summative, must necessarily have a place in any system. The changes that have been introduced since mid-1977 have just been launched, and evaluation concerning the way the implementation is proceeding reaches the Ministers regularly through feedback.

The family, the community and work place, along with the temple, the kovil, the mosque and the church are considered as sharing the responsibilities for education with the school, the college and the university. It is in this tradition that the nation is steeped. Long before organized schools were established in Sri Lanka, the socializing and educational functions were the responsibility of the family, the community, the work place and the temple. The Ministry of Cultural Affairs as much as the Ministry of Small Industries, the Ministry of Scientific Affairs as much as the Ministry of Education and the other Ministries are conscious of these responsibilities.

While the education system's response to the fearsome challenges such as population growth, environmental pollution, scientific and technological development—through the curriculum—is a matter for the Ministry of Education, the co-ordination of the school programmes with other agencies and Ministries is done at inter-ministry and inter-agency levels.

Moral and ethical education are a part of general education in Sri Lanka. Religion is compulsorily taught to everyone in the system and days are set apart for religious observances too. Religion is a subject that can be studied to the level. A land that had been, as was the case with India in pre-Christian times, resplendent with yellow robes, has brought up this tradition in a spirit of good will and understanding towards all religions right up to modern times.

Problems associated with higher education

Earlier attempts to reform higher education did not work well. Plans have therefore been made to restore to the campuses their identity by raising them to the status of autonomous universities and expanding the facilities provided. This is in addition to creating new universities.

In certain of the campuses an attempt has been made to diversify the curricula by introducing job-oriented courses and by giving an applied bias to the teaching of certain subjects, particularly science.

In the coming years it is proposed to reorganize and develop the system of university administration and management and to set up a

University Grants Commission and a University Service Commission. One will ensure university autonomy and the other better administration and management. It is also proposed to formulate a new university Act. Already a new ministry has been established to look after higher education.

In addition to the expansion of existing facilities for higher education and the establishment of new universities it is also proposed to set up Colleges of Technology in collaboration with the Tea Research Institute, the Rubber Research Institute and the Coconut Research Institute to undertake research leading to the development of the principal cash crops.

It is also proposed to provide for the exchange of students and lecturers of universities in Sri Lanka with their counterparts in foreign universities. Research too will be encouraged. In addition, an open university will be established through the integration and reorganization of the existing Sri Lanka Institute of Distance Education and the Extension Service Unit of the University of Sri Lanka. These will contribute, along with the other programmes of non-formal education, to provide opportunities for lifelong education.

Major programmes for the 1980s, and international and regional co-operation

It is well that the latter half of the 1970s has ushered in for the people of Sri Lanka fresh hopes for a brighter socio-economic future. The immediate major undertakings of the present government; namely, the accelerated Mahaweli Development Project, the setting up of a Free Trade Zone, the Greater Colombo Development Plan and other development schemes are the harbingers of other major schemes of development to follow. These are bound to result in greater productivity in the agricultural and industrial sectors of the economy and would, in turn, lead to a much higher rate of economic growth. This should result in a larger allocation for education, even if education's share of the national budget were to remain at a level not higher than it is now.

Notwithstanding the prospects of a brighter future the present problems may remain. The rate of increase of population has happily come down to about 1.6 per cent and, in the years to come, it is expected that it will come down further to about 1.2 per cent. This does not give immediate relief as the potential for increased births over the next decade is already present in the young base of the population and, as the children who will enter the schools in the next five years or so have already been born. The problem of unemployment may be alleviated to a considerable extent. More food will be grown than before, and the country should be

self-sufficient in staple foods. Even so, under- and mal-nutrition are likely to remain for some time; so too is inflation.

The Free Trade Zone and the industrialization of the economy are bound to add to the national income but still the main income earners may be the principal cash crops. The burden of foreign debt is going to be heavy and debt servicing alone is going to eat up a considerable part of foreign earnings. This will be the background against which the educational system will have to function.

The search for relevance to actual conditions will be the key concern for the 1980s; just now the endeavour is to consolidate the system. Education's contribution to the *development of the individual and thus to the development of society* are foremost in present thinking. To redress the imbalances and the shortcomings in the present system and thereby to build a dynamic nation imbued with the knowledge, skills and values required to understand and appreciate its heritage and able to contribute to building a good future is the task immediately ahead.



THAILAND

Changes in the educational system

1. **School structure.** Under the National Education Scheme of 1977, the new structure of 6-3-3, (i.e. six years of primary education, three years of lower-secondary education and three years of upper-secondary education) replaced the former structure of 4-3-3-2 in 1978.

A factor contributing to the change was that the government was unable to expand seven-year compulsory education to cover all sub-districts. Since 1963 there have been only 3,583 of the 5,517 sub-districts having seven-year compulsory education. Therefore, in order to accelerate the expansion of compulsory education, the primary level has been reduced to six years. With the improvement of curriculum and the increasing number of school days per year, six-year primary education should reach higher standards than before.

2. **Curricular change.** With the new school structure, the government has modified curricula for primary and secondary education. The new curricula will be phased in annually at two levels, primary and secondary, thereby taking six years to complete the changeover. The new curricula place emphasis on vocational orientation both at the primary and the secondary levels, to suit the social and local requirements.

3. **Educational equality.** It is the aim of the Thai Government that its population should have equal access to and opportunity in education. For the Fourth Education Development Plan the target is as follows:

- a) Compulsory education will be further expanded.
- b) There will be more secondary schools for the sub-districts. Each year, 100 more schools will be opened.
- c) The enrolment system will be according to the students' domicile in 'zones'.

4. **Equality of access to higher education for the provinces.** Hitherto, those who have completed their secondary education in Bangkok stood a better chance of being admitted to universities. For instance, in 1973 in the north-eastern region, where the population was 34 per cent of the total population, the number of secondary students was 8 per cent, the number of applicants to universities from the region was 5 per cent, and

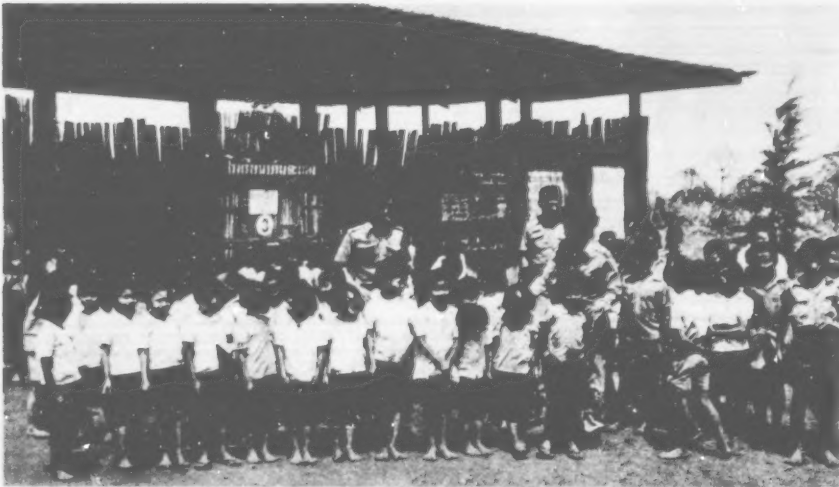
the number of those admitted 3 per cent. In Bangkok, where the population equalled just 10 per cent of the total population, the number of secondary students was 59 per cent, the number of applicants to universities equalled 70 per cent, and the number of those admitted equalled 77 per cent of the total enrolment.

In this connection, attempts are being made to improve the opportunity of access. The provincial universities have proposed special admission schemes, with quotas for rural applicants from 25 to 40 per cent. In addition, Chulalongkorn University and Mahidol University in Bangkok have special programmes for admitting students from the provinces to medical courses, on condition that they return to work in their region on completion of studies.

5. **Administrative change.** During the Fourth Development Plan the decentralization policy will take effect. Local officials will have more authority to make decisions, and people will participate in policy-making and decision-making at the local level. The Central Authorities will establish educational policy and planning, give financial and technical assistance and organize certain educational programmes.

6. **Teacher training.** The Fourth Development Plan aims toward producing 296,565 qualified teachers at all levels.

7. **Roles of the State and private sectors in educational management.** At present, educational management in Thailand is partly run by the State and partly by private sectors from kindergarten to university levels. In 1977, the student population was 8.62 million, 1.24 million of whom



were at private institutes. The government's policy may thus be seen as to encourage private sectors to play a part in educational management, especially at the non-compulsory levels. In the Fourth Development Plan, it is stated that, with regard to higher education, the government will not expand the subject areas which the private sectors have already managed efficiently, such as business administration, economics, accountancy and engineering sciences. In the field of Social Sciences, the target enrolment for the Fourth Plan is 20,700 in private institutes as compared with 14,500 in government institutes while, in engineering, the figure is 3,600 for private institutes as compared with 9,000 for government institutes. The policy is beneficial as it is conducive to greater awareness of education and to competitive spirit with regard to the quality of education.

Adult education

The Agency directly responsible is the Division of Adult Education, Department of General Education, Ministry of Education. Originally, the work envisaged was to combat illiteracy and to promote civic understanding of democracy. The scope has since been considerably enlarged. Accordingly in 1976, towards the end of the Third Development Plan, it embraced out-of-school education, formal, non-formal and informal alike. In this way the clientele includes people of all ages. The same principle is even more prominent in the Fourth Development Plan (1977-1981). The objectives are: (1) to encourage people to solve problems for themselves, taking into consideration such factors as environments and self-awareness; (2) to promote working skills in people for their better livelihood by providing short-term vocational training commensurate with local needs; and (3) to provide information services for the public, through public libraries, village newspaper-reading centres, radio correspondence and television for non-formal education.

The Fourth Educational Development Plan aims at developing curricula both short-term and long-term, with content that will be profitable to society and relevant to the needs of the community. Plans are to provide functional literacy to about 600,000 people; to provide continuing education at grades V to XII to 900,000 people; to provide continuing education, through correspondence and radio programmes to 200,000 people; to provide semi-skilled training to 700,000 people and to provide 'interest-group' training to 200,000 people. Thus, the service will be made available to 2,400,000 persons. The figure is still very small, when compared with the total population.

Current out-of-school programmes

Regional 'Out-of-School Centres' have been set up with a view to promoting rural public welfare and people's ability to solve problems in work

and everyday life. The centres are to undertake research and experiments and assist the Ministry of Education in the effective carrying out of adult and out-of-school education at the local level to better meet the needs of the rural people and society. Four such centres have been established. They act as centres for research and development of curricula, textbooks and other educational materials suitable for geographical and social situations as well as the occupations of the people in the region. They also undertake experiments and demonstrate new techniques and technology and provide training and information to out-of-school education workers in the regions.

Public Education Centres have been set up in almost every province throughout the kingdom under the jurisdiction of the provincial authorities. They are responsible for the effective management of out-of-school education in different forms within the province, and the dissemination of education to rural people.

A Functional Literacy Programme was launched in 1970. Thus far, enrolment has been relatively small due to many shortcomings and limitations. As it has been found that the curriculum formerly used for adult education does not answer the real needs of the people, a new curriculum has been produced. It is more flexible, enabling people to choose subjects according to their interests and skills and giving vocational subjects as electives in place of academic subjects. This has helped people in their occupations and in improving their home environment. The new curriculum has integrated social science subjects, health education, population education and ecology as well as other useful social science subjects and everyday life subjects joined into one single subject, entitled 'Promotion of life experience acquisition'. Requirements according to this curriculum are Thai language, life experiences, maths, sciences, English, with vocational subjects as electives.

Vocational adult education has been arranged to promote the occupational well-being of the people. The subjects taught are industrial subjects, home economics, business administration and agriculture, with future emphasis to be on agricultural subjects. The Group-Interests Programme aims at assisting members of the group to be able to utilize individual abilities and skills with due concern and love for the environment.

From research undertaken on illiteracy, school-leavers in rural areas after completion of the four years of primary school rarely have anything to read, and soon relapse into illiteracy. One way of combatting this is to provide the people in the rural areas with a newspaper-reading centre in the village. This programme was started in 1971 and aims at assisting the villagers to be able to follow up-to-date technical developments and current news.

Education in countries of Asia and Oceania

As radio is so inexpensive, it plays a very influential role in the educational process of the people. A survey in 1974 revealed that, of the then 6,688,501 households in the country, 4,743,668 or 70.9 per cent owned a radio set. The educational radio programme was started in 1977 with emphasis on agriculture, health and hygiene, social sciences, culture and recreation.

Education for out-of-school youth

A National Youth Promotion Committee was set up in 1973 comprising representatives of concerned bodies, with the Minister of Education as Chairman. This committee determines policies for youth as well as work plans. It approves, co-ordinates and follows up projects proposed and implemented by the competent bodies concerned.

In the present situation, the majority of youth in Thailand have merely completed compulsory education, and probably never return to school. With the rapid population growth and fast technological advancement, and while social conditions are not adjusted to the changes, it is necessary for the government urgently to undertake the task of guiding young people toward becoming responsible citizens, able to contribute to the development of the nation. According to 1977 statistics, the total population of Thailand was 44.27 million, 29.50 million of these belonging to the youth group. Of the youth 9.11 million were absorbed in the educational system while 20.39 million were out-of-school. This, however, includes 6 million infants under school age, plus 14.39 million youths who were within school-age range but were not given opportunities to be in school.

The present policy is to instil in young people a sense of values and faith in the way of life under democratic monarchy; to especially urge them to uphold the Nation, the Religion and the Monarchy as their spiritual inspirations, and to be ready to devote their lives and sacrifice their personal happiness to the cause of national security. Long-term policies are designed (1) to promote the physical, mental and intellectual health of youth; (2) to improve the conduct of the everyday life of the youth within the boundaries of moral and ethical principles of the religion they profess and in accordance with Thai culture; (3) to inculcate in youth a sense of pride in being Thai; (4) to promote and develop [good character]; (5) to promote education and vocational training at all levels in accordance with the socio-economic needs of the locality and the nation; to enhance, through the non-formal education process, skill development through practical work experience, field trips and self-learning; (6) to promote mutual assistance . . . in the protection of the mentally disturbed, the disabled, orphans and paupers, the abandoned, those addicted to drugs, and

those recently discharged from prisons; (7) to devise preventive measures against crime and to eradicate sources of vice; and (8) to promote friendship and understanding among the youth within the country and with those in foreign countries.

Various government and private institutions are responsible for out-of-school education, including the Prime Minister's Office, Ministry of Defense, Ministry of Education, Ministry of Public Health, Ministry of Agriculture and the Office of University Affairs. The National Research Committee, Office of the Prime Minister, is engaged in a five-year research programme in philosophy and the social sciences relating to youth development. The Ministry of Defense will operate a Youth Vocational Training Programme for young people who have completed only compulsory education. The Ministry has established a school for the hill-tribes to enable their children to have the opportunity to complete compulsory education and find a useful place in the Thai society. It has also organized a Rural Library Programme to provide the people in the rural areas with opportunities to further their knowledge.

The Ministry of Agriculture and Co-operation runs a programme for the setting up of young agriculturist groups to train youth in and out of school to be able to participate in group activities for self and community development. The Department of Community Development of the Ministry of the Interior organizes programmes of vocational training for rural youth to train others in agricultural techniques and handicrafts in order to alleviate unemployment problems and increase local income.



The Ministry of Education provides short-term training in agriculture to give additional vocational knowledge to agriculturists who have only completed compulsory education and to enable them to work more effectively on their farms. There is also a Mobile Agricultural Unit to instruct young people in modern agricultural techniques and technology by organizing short courses at schools and colleges.

Educational reform

The four basic questions. In June 1974, the Cabinet appointed a Committee for Establishing a Framework for Educational Reform. The Committee made a study of education both as a system and a process and sought answers to the following four basic questions:

1. What is desirable education?
2. For what purpose should education be organized?
3. For whom is education organized?
4. How should education be organized?

The essence of the reform can be summed up as follows:

1. That there be equality in education to promote social justice in a democratic society with the King as Head of the State.

2. That the education system be more flexible and open, thereby making the relationship between formal and non-formal education closer in order to comply with social conditions and the socio-economic development of the country.

3. That the content and learning process be improved and changed to meet the objectives of education at each level and for each type. . .

4. That the role and status of teachers be improved and changed, as well as those of associated non-teaching personnel that they serve as agents for educational reform.

5. That the system and structure of higher education be improved and changed to bring about unity at this level . . . so that their operation can better meet the needs of society.

6. That the government shall be solely responsible for compulsory education, as stated in the Constitution. The private sector may share the responsibility of organizing non-compulsory education—with the condition that their aim is not the making of profit. Private education will be under the supervision of the government.

7. That there be unity at the policy-making level and in the administration at both the central and regional levels. That both power and authority be decentralized so that the local people can share the responsibility of organizing education suitable for their needs.

8. That efforts be made to utilize with maximum efficiency [all] resources for education in order that it be expanded as widely, equally, and justly as possible.

9. That there be a unified legislative structure in education . . .

10. That there be other social reforms which are related to education in order to help attain a meaningful life for all . . .

Measures initiated

According to National Education Scheme 1977 (B.E. 2520), implemented in 1978, there are definite guidelines concerning opportunity and equality in education at various levels. A few of these:

No. 11. The State shall make compulsory education universal. Compulsory education shall be free in government and local schools.

No. 12. Education institutes shall enrol students in all fairness and with due regard to their abilities. . . the State shall promote uniformity of the standards of educational institutes, regardless of their location.

No. 14. The State shall step up and promote various kinds of out-of-school education in order to make available lifelong education to all, especially to those who missed initial schooling.

No. 15. The State shall make education accessible to the poor, the physically, mentally and socially handicapped, as well as to the educationally disadvantaged.

No. 17. The State shall organize and promote secondary education. Every citizen has the right to this level of education which is given in accordance with and in response to the country's economic and social needs.

No. 19. The State shall take special steps to select suitable candidates for teacher training, with a view to providing intelligent, suitable and competent teachers.

No. 21. The State shall prescribe the requirements for local people to be educated according to their needs and the needs of their community on condition that upon completion they will return to work for their community.

No. 23. The State shall . . . find ways and means to strengthen resources for education, bearing in mind equality among different communities and educational institutes. The State shall also provide grants and seek other means to assist the needy so that they will receive necessary education.

No. 24. The State welcomes the private sector to share the responsibility of educational management, within approved limits.

Pre-compulsory education. The private sectors and local community are encouraged to set up kindergartens and early-childhood centres which will absorb local children throughout the country. Existing schools will also be community schools giving service to the public. Such activities as housewives' meetings, lectures and demonstrations of child-care can be held in the schools.



Primary education. Plans have been made to increase the number of schools, and admission requirements have been laid down. Legislative measures on compulsory education have been modified, allowing the age of school entry to be flexible between 6-8 years. Each district determines its own age-requirements. Certain schools are associated in order to economize resources, personnel and materials. Qualified teachers are to be stationed in adequate numbers throughout the country in order to improve the schools in the rural areas. Regions are encouraged to develop their own curricula and textbooks in accordance with local needs and children's interests. Budgetary procedures are improved on the principle of "the more needy the region, the greater the portion of government budget."

Secondary education. There is a secondary school for each 'District' in the rural areas. There will also be a school for every five 'Sub-districts'. Schools in cities are grouped according to the zoning principle. School locality and travelling distance from home to school are also taken into account. Budgetary allocation is made on the basis of equity and suitability. Grants are available for the needy. Student assessment has become the responsibility of the schools. Qualified teachers are allocated proportionately to schools throughout the country.

Higher education. A policy for establishment of institutes of higher education is in effect. It gives due regard for socio-economic conditions of the region and manpower for each educational field. Motivation,

inspiration and welfare are enhanced to encourage teachers and lecturers to go to rural institutes. Quotas are given to secondary schools in the regions for places at regional institutes of higher education so that more opportunities are open to students of the region.

Opportunity and equality in education for girls and women

Formerly there existed inequality in the status of men and women. Although the present legislation has redressed the situation, in practice, women are still at a disadvantage as far as access to higher positions is concerned. To give justice and equality to women, therefore, the Fourth National Plan for Social and Educational Development (1977-1981) has certain provisions. Follow-up study courses are to be organized for women in rural areas to enable them to participate with more responsibility in local development activities. Out-of-school education is given to women to enable them, together with their male counterparts, to understand the principle of equality between the sexes. Government agencies and private institutions are encouraged to co-operate in organizing training courses for women in order to enhance their skills in accordance with local needs.



Education in countries of Asia and Oceania

Laws that prevent fair and equal treatment of women are to be revised and modified. Emphasis is placed on the protection of female workers in various occupations.

Progress in adult education and literacy

The census carried out in 1947, 1960, 1970 and 1975 indicates a general decrease of illiteracy for the over-10-years age group: 1947—46.3 per cent; 1960—29.2 per cent; 1970—18.2 per cent; 1975—18.5 per cent. For 1976, the percentage of illiteracy was as follows: Central Region (not counting Bangkok)—6.4 per cent; Northern Region—26.4 per cent; North-eastern Region—25.2 per cent; and Southern Region—24.4 per cent.

Education in the rural areas

As the majority of the population lives in the rural areas, it is the government's present policy to try to minimize the differences in educational quality between the urban and rural areas. In formal education in the rural areas, the emphasis is on primary education, secondary education and vocational education. Primary education receives central attention. The agencies responsible for this level of education are the Ministries of Education and of the Interior, and the Bangkok Metropolitan Administration. They work in co-operation with local authorities in matters pertaining to compulsory education, textbooks, educational material, and reduction of educational wastage. They also launch a joint effort to turn primary schools into community schools.

For secondary education, the more able and qualified teachers are assigned to work in the rural areas. The schools are better equipped with educational material. About 100 schools are opened at 'sub-district' level each year, to provide better access to education for rural children.

With regard to vocational education, because 70 per cent of the population are in agriculture, more agricultural schools are set up every year. As to other types of educational development—for instance, arts, culture, teacher training and physical education as well as institutes of higher education—efforts have been made to expand educational facilities in the rural areas. It is expected that this will decrease the flow of students to Bangkok, while at the same time cultivating attachment to their own regions. This will also contribute greatly to rural development.

Increases of educational fees

At the second and third levels, as it is the minority of the population who benefit from State education, such as the learners themselves, business firms, companies and organizations, it is appropriate that these groups should contribute more towards education and help to bear the

burden which has up to now been solely upon the majority of the population. Furthermore, students who have not been able to enrol in public schools have to pay very high fees to enrol in private schools—a rate which is much higher than that of public schools, in spite of the fact that the quality of education in public schools is generally higher than that of private schools. It is therefore desirable that fees of State-run schools and institutions be increased at the second and third levels of education.

The belief that the increase of fees is a measure contrary to the benefit of poor children is a myth, for it is the minority of the population who can afford to pay school fees and not the majority of the population, who are so poor that they can pay no fees at all and lose all opportunity. The government will thus have to make special financial contributions to poor students who are already in the educational system.

At the university level, it is appropriate to make a big increase in university fees so that the universities can pay their own expenses without drawing on the national budget. To help needy students, loans are provided, to be paid off in instalments upon the completion of education. To help the rural people, the government takes the responsibility of providing full financial assistance to those who have committed themselves to work in the rural areas. It is estimated that some 60 per cent of the students are prepared to accept this condition.

Utilization of school buildings. A large number of school buildings are still under-utilized. It is estimated that they are only used for six or seven hours a day and 180 days a year or, in practice, even less. Currently, some schools are therefore introducing the two-shift system, evening classes, or special courses in off-hours. It is estimated that, while the two-shift system will incur a 90-per-cent increase per capita in operational cost, the capital cost will increase by only 10 per cent.

Normally, 50 per cent of the expenditure on school constructions in the rural areas is the labour cost. Measures are therefore taken to mobilize all the existing manpower in each community to help with the construction of school buildings. Parents and people in the communities are themselves willing to render their assistance in their spare time, because they want to see more schools in their communities.

'Sandwich-courses'. It is often found that vocational and technical students are insufficiently trained in practical work in spite of the high educational cost incurred by this type of education. The inadequate practical knowledge of these students also puts them at a disadvantage when applying for jobs, for business firms and companies tend to give priority to applicants who have already had some working experience or undergone proper training. It is therefore suggested that 'sandwich courses' be

introduced. These are to be like other 'work-study' schemes. Besides enabling the students to benefit from both the theoretical and practical aspects of their education, the introduction of 'sandwich courses' will help to reduce educational cost because, while one group of students are undergoing training, the other group can pursue their studies in schools. This can be done alternately on a six-month basis. At present, vocational schools in Thailand offer short courses of from three-to-six months.

Schools as centres for production

It is essential that schools be not only places for consumption, but that they inculcate in students the spirit of production. This would have an indirect impact on the economic and social development of the nation. The old belief among students that white-collar workers gain high social status must be broken down. Students must be taught to have a higher regard and appreciation for manual work. The manual and productive aspects of education such as farming, stock-breeding and gardening should therefore be incorporated in the school syllabus. The products obtained can either be used for school consumption or sold at a good price to the public. The emphasis on the manual aspect of education in the school syllabus will not only provide the students with basic experiences in economic matters but will also cultivate in the students a sense of achievement leading to job satisfaction. Moreover, the profit gained from the sale of the products will contribute to the school income.

Schools as centres for middleman training. The training of students to be middlemen should be incorporated in the school syllabus. This can be done through co-operatives which will act as agents to sell goods to people outside the schools. Several colleges and universities in Thailand already have their own co-operatives, although this kind of business enterprise has not yet been introduced in primary and secondary schools.

In fact, business enterprise for students should not be limited to the setting up of co-operatives, but should encompass other aspects of business. Some of the theoretical side of schooling should therefore be replaced by practical business subjects, such as accountancy, marketing, commerce, finance and basic economics.

Reduction of educational wastage. This is one of the most effective measures in reducing educational costs. The problem is most acute in primary education, especially in grade I where education is provided free of charge by the government. The wastage incurred in primary education is estimated at 300 million baht* per year. One way to reduce educational

* 20.15 baht = one U.S. dollar

wastage is to abolish the system of examination for class promotion and replace it with formative evaluation and automatic promotion. This has its drawbacks.

As for wastage at other levels of education it is asserted that the main cause is again the evaluation system which screens out low-performance students without providing an alternative for further education, the reason being that there is an insufficient number of school buildings and equipment.

The decentralization of authority

The decentralization of authority to the communities will help to reduce the burden of the government and offer other advantages. It will give more incentive to people in the communities to mobilize the local resources for educational management and at the same time create a sense of participation. Educational management can then be more relevant to the needs of the communities. The government should only bear the responsibility of maintaining security and peace inside the country and national defence but should leave educational management in the hands of the communities. The government may however, render assistance to communities which have a very low per-capita income and economic potential to ensure equal opportunity in education.

Education in connection with work and employment

Education as manpower development cannot stay in balance with the rapidly changing demands of the labour market. Ten years ago, during the second five-year Social and Educational Development Plan, there was a shortage of middle-level manpower and therefore secondary vocational education was quickly expanded. Under the present conditions in Thailand, the labour market is not in a position to absorb all the vocational school leavers; hence there is 'educated' unemployment.

The large number of vocational secondary school leavers who find themselves unemployed are then forced to continue their studies at a higher level. Because they come from the vocational stream, they cannot very well compete with those from the academic stream of education in the university entrance examination. To cope with this unexpected situation, the government has opened technical colleges to absorb these students back into the school system. This, done under pressure, gave rise to another type of problem, the lack of qualified teachers and instructors as well as the lack of technical equipment and materials necessary for the operation of such institutes and colleges.

A large number of vocational secondary school graduates who are not absorbed by the technical institutes or colleges run by the government

Education in countries of Asia and Oceania

or the private sector, are forced to enrol in the 'open university' to pursue higher education in an academic area. Vocational secondary education therefore becomes a stepping stone for them. In spite of the fact that vocational secondary education requires higher investment on the part of the government, it fails serve to any real purpose for these students. Vocational education provided within the system is not geared to meet the occupational needs of the local people, especially in the rural areas, particularly those who are already working.

Educational problems

A few of the problems of primary education are the following. (1) There is a high percentage of repeaters amounting to about 16.3 per cent of the total number of pupils of this level. (2) There is a shortage of teachers and inadequate distribution of teachers to poverty areas. (3) There is a shortage of textbooks and other educational materials and inadequate curriculum content; the curriculum that is currently used basically aims at preparing students for higher education. . . (4) The division into educational regions is not done in proportion to the density of the population in the region, and planning for expansion of physical facilities is accordingly not suitable: this calls for central planning at the provincial level. Finally, (5) school inspection and supervision are not extensive enough due to the shortage of personnel, budget and proper co-ordination, and learning and teaching are not up to the desired standard.



Some problems of general secondary education are these. (1) The curriculum for this level is neither flexible nor self-contained; school-leavers at this level cannot meet the middle-manpower needs nor the needs of the locality, thus causing them to proceed to higher education. (2) A lack of educational materials in most schools in the provinces impedes education and lowers quality. (3) The evaluation system is not an integrated part of the learning process; in most schools, teachers have no authority and part in the evaluation process. Further, the current system of central examinations for schools all over the country has proved inadequate. (4) Classroom space has become a serious problem for some schools where the number of places is not proportional to the number of students—(this could be solved by better zoning of schools). (5) There is a lack of qualified teachers, particularly teachers of specialized subjects such as arts and crafts, physical education, guidance and counselling, agriculture and the performing arts.

In teacher training the problems include the following. (1) Teacher training courses are offered at so many levels and organized independently by so many different institutions that there is a lack of co-ordination of policies and targets. (2) The accelerated production of a large number of teachers to cope with the short-term deficiency has generated a number of poorly-qualified teachers. (3) Teacher training curricula at various levels and of various types are not in tune with one another and with the needs of local society and of the country as a whole. (4) Teachers currently teaching at teacher training institutions are to a large extent not taught how to train teachers.

In higher education the problems are these. (1) The curricula are not properly balanced between general and specialized subjects. This problem is aggravated by the lack of textbooks both in Thai and in foreign languages. (2) Most professors and lecturers have very little research potentiality; the administrative and financial systems are not conducive to research. (3) Institutes of higher learning have not given sufficient service to the community due to the lack of planning. (4) The production of certain types of higher-level manpower does not synchronize with the demands of the labour market and the needs for development, and hence there is unemployment among graduates of higher-education.

The problems of out-of-school education include the following.

1. At present, despite its already long existence, there is no single, common, central policy with a clear-cut philosophy and objectives for the running of all out-of-school education. This is due to separate administration by various responsible bodies and has resulted in great complexity.

2. The management of out-of-school education is too centralized.

3. Without a common policy and long-term planning, it is difficult to allocate appropriate budgets for out-of-school education according to the needs of each department and locality. Further, the budgets are integrated within other budgets, which has resulted in a shortage of personnel, teaching facilities and buildings.

4. The lack of personnel training for out-of-school education has necessitated the transfer of personnel without any knowledge of out-of-school education to fill the teaching and administrative posts of any new out-of-school institute. The teaching and learning are still carried out in the same way as in school education, which gives undesirable results, as out-of-school education has its own proper characteristics. Moreover, no improvement is foreseeable because of the lack of research and analysis.

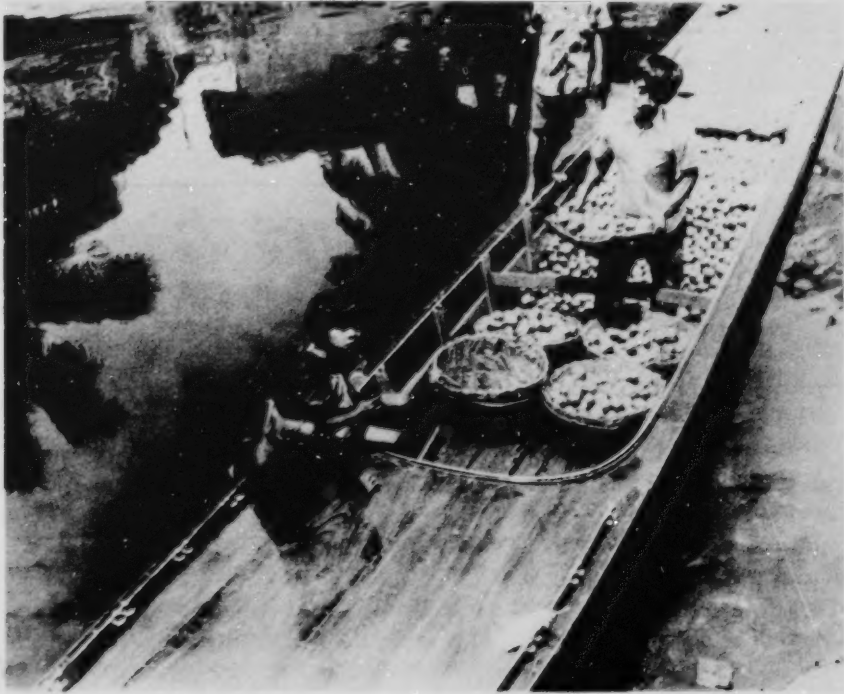
5. There is very little research into what kinds and levels of knowledge local people need and want. Also, there is little evaluation of existing out-of-school education to utilize the results for improvement.

Vocational education at the second and third levels has the following difficulties. (1) The increased enrolment in vocational education has resulted in poorer quality as the learning and teaching materials have not been increased accordingly. (2) Specialized fields provided by vocational education institutes were established without sufficient labour-market information, and consequently, the supply of skilled persons produced has not matched market demand. (3) There is a shortage of qualified and specialized teachers for research in vocational and technical fields.

Policies and guidelines for solving the problems include the following: (1) establishment of co-ordination between the various bodies, both governmental and private, which are responsible for the provision of vocational education and manpower development planning; (2) establishment of a system for follow-up and data-feedback regarding vocational school leavers at secondary and post-secondary stages; (3) improvement of the vocational education system at the post-secondary level so that it becomes an open system offering afternoon and twilight courses; (4) improvement of the structure and content of the vocational curricula so that education at each level is complete and terminal, and with greater emphasis on vocational subjects, particularly managerial skills necessary for self-employment; (5) improvement of the work of vocational colleges so that they may serve as training centres for in-service teachers in industrial and agricultural areas; (6) expansion of agricultural education at post-secondary and higher levels so that enough manpower in this area is produced to

Thailand

meet the development needs of the country; and (7) organization of short-term training courses for agriculturists in the rural areas, using agricultural schools and colleges as local training centres.



THE UZBEK SOVIET SOCIALIST REPUBLIC OF THE UNION OF SOVIET SOCIALIST REPUBLICS

The Uzbek Soviet Socialist Republic is a sovereign republic of the Union Soviet Socialist Republics, equal among equals in the multinational family of peoples of the Soviet Union. The country independently exercises State power within the border of its territory. The Uzbek SSR has a Constitution of its own, a national anthem, emblem and State flag—which are a symbol of sovereignty and State independence of the republic.

The Uzbek Soviet Socialist Republic occupies the central part of Central Asia and covers approximately 450,000 square kilometres, entirely inland. The population exceeds 14 million. Uzbekistan is a multinational republic inhabited by representatives of 120 nationalities, 65 per cent of whom are Uzbeks.

A mighty economic potential has been built up in the Republic during the years of Soviet power. There are more than 100 branches of industry in Uzbekistan today. The Republic exports more than 130 different products of its heavy and light industries to 60 countries, including 16 European countries, 18 countries of Asia, and eight American countries. The volume of industrial output has been extended 176 times as against 1924.

Electrical power engineering has grown rapidly. Now Uzbekistan produces 35 billion kilowatt hours of energy annually, which is 45 times more than all the power stations of the Soviet Union generated in 1922.

Before the Great October Socialist Revolution, agriculture was very backward in Uzbekistan. Today the Republic can boast of having a highly developed agriculture, and has become the major cotton producer in the Soviet Union. At present Uzbekistan produces more than 65 per cent of the entire cotton crop grown in the USSR. Cotton has been known to grow in Uzbekistan for over 2,000 years, yet only in Soviet times this most important branch of the economy was increased to an unprecedented level. In pre-revolutionary times the annual production of cotton did not exceed 200,000 tons as against 5,350,000 tons produced in 1977.

Besides cotton, such crops as grain, kenaf, melons and potatoes are grown. Silkworm breeding, cattle-breeding, gardening and vine-growing are also well developed.

Uzbekistan is a country of ancient culture. People who have contributed greatly to the treasure house of world culture have lived in Uzbekistan from time immemorial. The victory of the socialist revolution and the wise Leninist nationality policy of the Communist Party have turned Uzbekistan into a land of high culture, which ranks with the most advanced countries in the world. Soviet power has created all conditions for the spiritual and cultural advance of the broad masses. Huge sums are spent on social and cultural arrangements. All working people have access to libraries, houses of culture, people's theatres, cinemas, museums and exhibition halls.

Formerly a country of almost total illiteracy, Uzbekistan now has universal secondary education. Instruction at the Republic's schools is conducted in the languages of the peoples inhabiting the Uzbek SSR—the Uzbek, Tajik, Kirghiz, Russian and other languages.

During the past 53 years, since its establishment as a Soviet Republic, Uzbekistan has become a major centre of science. Uzbekistan ranks fifth in the USSR as to the number of scientific workers. Scores of research institutions have been set up with a total in staff of more than 30,000 scientific workers. The Uzbek Academy of Sciences, founded in 1943, holds a leading place among research institutions. It embraces 31 scientific research institutes whose staff include 42 Academicians, 50 Associate Members, 189 Doctors of Science, and 1,509 workers with Master's degrees. The research institutions in Uzbekistan are provided with up-to-date equipment.

Creative contacts between Uzbek scientists and their foreign colleagues are steadily growing and this contributes to the consolidation of friendship and co-operation in the name of peace and progress. Scientists of Uzbekistan have often been elected members of foreign scientific institutions and academies.

In Soviet times, art has grown amazingly in Uzbekistan. There are two opera and ballet theatres, 20 drama and comedy theatres, two Philharmonic Societies, symphony and variety orchestras, dance companies and four children's theatres.

Care of public health is the Soviet Government's special concern. The health of the working people is ensured by free medical care, a wide network of health services, health resorts, sanatoria and rest homes. In recent years such infantile maladies as scarlet fever, diphtheria and whooping-cough have been wiped out. This has reduced infantile mortality ten-fold.

V.I. Lenin said that no State and no democratic legislation had done half as much for women as had the Soviet Union. With the advent of

Soviet power, women in Uzbekistan gained freedom and equality, recognition and respect. The entire Soviet people honour women who are mothers, and workers. Among the scientific workers in the Uzbek Republic, more than 11,000 are women, including 60 Academicians, Associate Members and Professors. Eighty-eight are doctors of Science, while 2,700 have a Master's degree. Forty-eight per cent of all the specialists with higher and specialized secondary education are women.

In Uzbekistan before the Great October Socialist Revolution, there were only a few dozen schools. In the initial years after the Revolution an offensive was launched to wipe out widespread illiteracy.

Popular education advanced at such a high rate that by 1940 the number of schools providing general education rose to 5,500, while total enrolments reached 1,300,000. Since then, Uzbekistan has become a Republic with 100-per-cent literacy. There are 9,500 schools providing general education in Uzbekistan today. The number of pupils attending school has risen to 4,000,000. One hundred thirty-five thousand boys and girls are trained in more than 200 professions at the 297 vocational schools. In the last five years alone, 147 new vocational schools were opened to train qualified workers and specialists for the national economy.

The development of higher education and specialized secondary education in Uzbekistan commenced with the foundation of the Tashkent State University through Lenin's Decree in 1920. At present there are 43 establishments of higher learning and 198 specialized secondary educational institutions, which have become centres for preparing highly qualified personnel for all branches of the national economy. The enrolment in these is approximately 466,000.

In the period between 1924 and 1977 the number of higher educational institutions increased 21-fold, and specialized secondary schools more than eight-fold. The growth in the number of students was exceptional: at higher-learning establishments it was 85-fold, and at specialized secondary schools 50-fold.

5.5 million people were involved in different forms of education in the academic year 1976/1977. This comprised almost 38 per cent of the Republic's entire population.

The variety of higher-learning establishments, training specialists for all branches of national economy, has been considerably extended. Today Uzbekistan possesses three universities, seven institutes of engineering, three institutes of economics, four agricultural institutes, 17 pedagogical institutes, five medical institutes and three higher-educational establishments in art and culture.

By right, the oldest of all the higher learning establishments in Uzbekistan is the V.I. Lenin Tashkent State University, one of the major higher-education institutions in the Soviet Union. It has 13 faculties, preparing specialists in 29 professions. The enrolment is 17,000.

The Alisher Navoi, Samarkand State University, was set up in 1933. The Moscow and Leningrad Universities took an active part in the development of this university by rendering substantial aid in training scientific and pedagogical personnel from the Republic, and in supplying literature and equipment. The Samarkand State University has 10 faculties training specialists in 14 professions. The University possesses a rich library with 1,600,000 volumes, among which are unique works of the great thinkers and scholars of the East—Firdousi, Nizami, Navoi, Avicenni, Rudaki, Babur and others. The students number 10,000.

The Tashkent Polytechnical Institute, where 34,000 students are trained in 63 professions at the 23 faculties, is one the largest higher-learning establishments for engineering in the Soviet Union. The Institute's main library possesses one of the biggest collections of literature in engineering in Central Asia.

The Tashkent Agricultural Institute was founded in 1934 for the purpose of training specialists in agriculture. The Institute, with a student-body of 7,000, trains specialists in agriculture for several countries in Asia, Africa and Latin America.

Specialized higher schools train artists, musicians, painters, sculptors and athletes. They are the Tashkent State Conservatory, the Tashkent Institute of Dramatic Art and others.

The Soviet Government and Communist Party show constant concern for the development of higher and specialized secondary schools. New buildings of higher and specialized secondary schools are being constructed, including hostels, dining-halls, gymnasiums, and other units. The lecture-rooms have up-to-date equipment.

Today the higher schools of Uzbekistan have all the necessary facilities for students to make progress. They have dining-halls, libraries, clubs, cinemas, holiday hotels, sports centres and polyclinics at their disposal. Seventy-five per cent of all the students are awarded State grants.

Major significance is attached to the Communist education of the students. Representatives of many nationalities of the USSR live and study as a tightly-knit family in the higher schools of Uzbekistan.

Many students from foreign countries study at the educational institutions of our Republic. In the 1977/1978 academic year, more than

Education in countries of Asia and Oceania

1,700 foreign students from 66 countries of Asia, Africa, Latin America and Europe studied at higher-learning establishments in Uzbekistan. The great bulk of the foreign students are citizens of Afghanistan, Algeria, Bangladesh, Bulgaria, Cuba, Democratic Yemen, Guinea, India, Jordan, Mongolia, Pakistan, the Socialist Republic of Viet Nam, and Syria.

In the current academic year, five citizens of Sri Lanka completed studies at the Preparatory Faculty of the Tashkent State University and have been assigned to higher educational institutions in Uzbekistan.

Internationalism is a major feature among Soviet students. In order to build up a communist attitude toward labour, the students participate in the work of labour teams and give assistance to the Republic's collective and State farms during their summer vacations.

The prospects for the development of higher education in Uzbekistan are in line with the high rate of advancement of the entire Soviet society. In the next few years some new types of high schools will be opened.

The rapid growth of the educational system in Uzbekistan is an eloquent testimony to the increased spiritual needs of the people, and the concern of the Communist Party and Soviet Government for the people's welfare. It is the realization of the slogan "All for man, all in the name of man."



DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA

Although the Democratic People's Republic of Korea did not attend the Colombo Conference, its report on education had been sent to the Office of Unesco in Bangkok in response to a request. The report is therefore published here in addition to those presented to the Conference.

The educational system

The Government of the Democratic People's Republic of Korea considers education to be very important. President Kim Il Sung, the respected and beloved Leader of the people, has taught as follows; "Education is the one of the fundamental questions decisive for both the revolution and the fate of the nation. Without educational work, there can be neither progress nor national prosperity, no matter at which time in a peoples' history and what nationality." The Government of the Democratic People's Republic of Korea puts a high proportion of its national resources into education, thoroughly implementing the correct education policy of the Workers' Party of the country at every stage of the development of the revolution.

The historical basis of the socialist educational system was created by President Kim Il Sung at the period of the 'revolutionary struggle'. He also directed its implementation, during which valuable experience in training revolutionary intellectuals was gained. After the achievement of independence, the popular, democratic educational system formed an important link in the socio-economic reforms that took place in the building of the new country. Thus the previous colonial education system was replaced and the new system further consolidated as the revolution developed, gradually evolving into the present socialist education system which ensures, for the entire population, genuinely equal rights to education.

The democratic and popular character of the education system is clearly determined by the Socialist Constitution of the Democratic People's Republic of Korea which was adopted in December 1972. This was followed by the enactment of a law enforcing 10 years of universal compulsory primary and middle-school education and one year of pre-school compulsory education. With the introduction of universal compulsory education, school fees were abolished. The state maintains all

Education in countries of Asia and Oceania

educational institutions from the kindergartens to the colleges as well as such establishments as children's and students' 'palaces'.

Compulsory primary education had in fact been introduced much earlier—in 1956. In 1967, nine-year universal compulsory education was started and at this time general education was closely linked with basic technical education and with production. Youth of the new generation now have 11 years of universal compulsory education beginning at 5 years of age, being one year of pre-school education, followed by four years of compulsory primary and six years of compulsory senior middle-school education. The system is pictured in the diagram below.

The system of education in the Democratic People's Republic of Korea

Age			
22	University or College	Higher Technical School	Higher Education
21			
20			
19			
18			
17			
16			
15	11-year Compulsory Education	Senior Middle School	Secondary Education
14			
13			
12			
11			
10			
9		Primary School	Elementary Education
8			
7			
6			Pre-school Education
5			
4	Kindergarten		

The basic purpose of this 11-year period of education is to have the new generation develop with the core elements of a revolutionary world outlook, complete their general education, and master more than one technical skill.

The important point about this system of education is that it does not give general and professional education separately to selected students. Instead it ensures that the education provided to all students is both equal and substantial and prepares them for higher education. Access of all students to education is such that wherever the students live, male or female, all have opportunities of education up to the highest level. Education is thus of a popular character.

Opportunities for education are not however confined to the young, as there is also a system for studying while working which has been developed in parallel with the formal system. The government has thus ensured that education has become available to the generation who were unable to study in the past as well as to the rising generation. The advantage of the 'study-while-working' system is that it helps to meet the ever-increasing demands for technical personnel while at the same time enabling economic reconstruction to go ahead. The study-while-working system operates through open-factory colleges and factory-specialized schools at the main manufacturing establishments in the country. There are also evening and correspondence courses for education to help those who study while working.

Lifelong education is an important part of the education system in the country. All officials study for two hours after work every day, attend special lectures every Wednesday and get together for group study every Saturday afternoon. In addition, all officials attend a compulsory course of from one-to-six months a year attached to schools of appropriate levels. Training courses are also provided for workshop managers and work-team leaders, designed to improve the quality of their leadership and technical skills.

The administration of education

The system used for the administration of education in the country is that known as 'democratic centralism', which is one of the features of the newly-adopted socialist constitution. The central administrative agency for education is the Education Commission of the Administration Council. It comprises representatives of the Higher Education Ministry and the Education Ministry. The function of the central administrative agency is to organize and guide the work of education at all levels from kindergarten to higher education.

At the local level, education is administered by a provincial education bureau and the education departments of the cities and the districts. These local administrative agencies work under the control of the central Education Commission and are guided by the local people's communities concerned. The senior middle schools, primary schools and pre-school institutions are under the control of either the city or district educational authorities while the senior specialized schools and colleges for training personnel for the province are guided and administered by the provincial authorities.

While the local administration provides the schools with some guidance in matters affecting content of education, its main function is concerned with school-building maintenance, student enrolments, teacher selection and teaching appointments.

Special effort has been made to provide and supply to the schools all those items which are necessary for their effective functioning. This includes the publication and supply of textbooks from the centre.

The Academy of Educational Science is the specialized research centre which organizes the theoretical and practical research work needed to improve the quality of education.

The government spends a substantial portion of its total expenditure for the development of education and the sums invested are being continually increased. In the four years from 1972 to 1975, for example, expenditure on education was increased 1.7 times. In 1976 the increase over expenditure of the previous year was 12.6 per cent.

Content of education and teaching

Education at all schools is based on a uniform programme published by the Education Commission. The curriculum at the school level is worked out by the Education Commission itself while that of the universities and colleges is prepared in the institutions concerned and approved by the Education Commission before distribution.

At the school level, considerable importance is placed on subjects which relate to the ideology of the country and the history of past revolutionary activities. Mathematics, music, drawing and handicraft, science and physical education as well as the national language and communist ethics are taught in primary schools. At the senior middle stage, the subjects are extended, and history, geography, English, Russian and French are also offered.

It is realized that the ability of the teachers is of fundamental importance as the teachers are responsible for the development of popular

education. However good the education system itself may be, its success cannot be guaranteed without good teaching. With this in mind the Government of the Republic attaches great importance to teacher training. Efforts are made to select the best students for enrolment at the pedagogical institutes. These institutes comprise normal colleges offering a four-year course for the training of teachers of senior middle schools, and teachers' colleges offering a three-year course for the training of teachers for primary schools and kindergartens. Both normal colleges and teachers' colleges are found in each province of the country.

In addition to full-time pre-service courses, in-service training of teachers is conducted both actively and systematically. Specialized education establishments for teacher retraining have been set up in the capital and in various other parts of the country, so that school administrators and teachers have access to retraining in a planned way. This in-service training is supplemented by correspondence courses conducted by both normal and teachers' colleges. In addition, the government runs a short course on teaching-method twice a year which is attended by all the teachers of the country during vacation.

Educational development, 1974-1976

The latter half of the six-year plan 1971-1976 well illustrates the sort of planned progress that was made in the field of education in the Democratic Republic. The planned target was, as we have seen, to raise the duration of compulsory education to 11 years, to strengthen the pre-school educational offerings and to make pre-school education free of charge; to increase to more than one million the number of trained technicians and specialists and to raise the technical and cultural level of the working people while stepping up the education of adults.

In fact the government succeeded in carrying out all of the planned objectives far ahead of the scheduled time. Not only was 11 years of universal compulsory education made law but the government engaged in a mass campaign on a nationwide scale to ensure that the provisions of the law were met. To meet the increased enrolment resulting from 11 years of universal compulsory education, more than 30,000 classrooms were built and some 200,000 teachers trained. The pupil-teacher ratio achieved was 25 students to every teacher.

Other changes to meet the planned objectives included the conversion of the two-year technical high schools, which had previously trained assistant engineers, into higher specialized secondary schools which trained technicians at a higher level. The teacher training schools for kindergarten teachers were raised to the level of teacher colleges while the quality of teaching in the higher technical schools was greatly improved.

Education in countries of Asia and Oceania

Today some 5,100,000 students are enrolled in schools and colleges of all levels in the country. There are 60,000 nursery schools and kindergartens with an enrolment of 3,500,000 children.

In the field of technical and vocational education, success was achieved and the number of technicians and specialists in the country reached 1,000,000 well ahead of the planned schedule. This in part was due to the detailed attention paid by the government to increasing the number of colleges and high schools specializing in subjects such as mechanical engineering, electronics and automation.

The government increased the number of factory colleges and factory-specialized high schools as well as the number of educational establishments provided for studying while working. In addition to these special efforts in the field of technical and vocational education the government improved the quality of education in the basic national sciences and in foreign languages.

SECTION THREE
BIBLIOGRAPHICAL SUPPLEMENT

EDUCATION IN ASIA AND OCEANIA: A BIBLIOGRAPHY

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Two other bibliographies relevant to this bibliography on *Science Education* and *Open Education* in Asia and Oceania are available upon request.

The Educational Documentation and Information Service (EDIS) of the Unesco Regional Office for Education in Asia and Oceania will appreciate being notified of Asian and Oceania documents on and related to education in the region published within the last five years which are not included in the bibliography. Better still, readers may wish to send the actual documents to Unesco EDIS, Bangkok.

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